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ESSAYS, MONOGRAPHS, AND CASES.

On the Movements of the Heart—the Sounds produced, the Pulse, and the Movement of the Blood. By ROBERT NELSON, M.D., of New York.

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The heart possesses two movements inherent in itself: diastole, or expansion; and systole, or contraction.

* The auricle and heart muscles, unlike voluntary muscles, are possessed of a double power—that of expansion as well as of contraction, which act alternately. If the power of expansion did not exist, the blood contained in the arriving veins would enter the auricles slowly and feebly, which is not the case. The next movement is that of contraction, a stronger one than the first. A large amount of this contractile and compressing force of the auricles is wasted towards the cavas, which, being exceedingly extensile and without valves, afford only a slight resistance, the inertia of their contained column, to a return back of their blood into them.

The next movement of the heart, like that of the auricle, is expansion; a force that not only removes all resistance to the entry of the blood, but by its tendency to a vacuum invites the contents of the auricles into the ventricles; were this not the case, each auricular contraction,

pressing on all parts of the mass excepting at the openings, would be so much resisted by the necessity of forcing the ventricles into expansion, that a large portion would be driven back into the almost unresisting cavas and pulmonary veins, and produce a very marked venous pulse in the large vessels; a pulse, though a small one, does take place, and which is very noticeable in some diseases of the right auricular valves.

Proof by Experiment.—Kill an animal by strangulation, drowning, or in any way that makes no wound for the escape of blood from, or entry of air into the vessels, and wait until it has become cold and rigid. On examining the heart, the auricles will be found full of blood, their contractile power having been insufficient to drive their contents into the ventricles, and overcome the last contraction of the latter. Some blood will be found in the right ventricle, sucked into it by the last feeble expansion inherent in its structure; blood will also be found in the left ventricle, but in less quantity than in the right, which is in proximity to the greater quantity furnished by the larger cavas and sinuses than the pulmonary veins. 2. Open the thorax of a living animal of good size, a large dog or pig, slit up the pericardium, and then placing the fingers on the auricles and the ventricles, it will be found how much more feeble is the contraction of the auricle than the expansion force of the ventricle. 3. Make an opening into the scrobiculus and through the diaphragm into the pericardium; next thrust the hand into the latter and grasp the heart. It will be found that the expansion of the heart greatly exceeds in force that of the auricular contraction; should the latter be deemed the injection force to cause the ventricular expansion. 4. Remove the heart of a live animal. It will be found that both the expansion and contraction of auricles and ventricles take place, although there is no blood present to be acted upon, none to be driven by the auricles into the ventricles, and by this means to distend the latter; therefore, this distension is an active and inherent force. These expansions and contractions, without the presence of blood, can be observed for a considerable time.

Having observed the movements of the auricles and the expansion of the heart, let us turn to the contraction of the latter, the ejection of its contents, and the accompanying sound produced.

The strongest motion of the heart is its contraction. This compresses its contents in all directions, forces the blood to escape by any openings, natural or artificial, that may exist. As the openings into the pulmonary artery and aorta afford no resistance, there is only that which is due to the elasticity of these tubes to resist the escape in this

direction. But that portion which seeks to escape by the auricular openings does so only in part, for the regurgitation carries with it the auricular valves as far as they can go—a distance that is limited and suddenly checked. As this check is the *first* arrest to the outward flow of the blood, it produces necessarily the *first* sound; and as the area of those valves is greater than that of the arterial valves, the impulse against them is proportionate to their extent, and the stronger and *nearer* force of the heart. The intensity and loudness of the sound must be proportionate to the surfaces and the impelling force, surfaces and impulsions that greatly exceed those of the semi-lunar valves, and the slow and quasi-passive elastic returning force of the arteries.

The next series of facts to be observed is the arterial pulse and the second sound. But before entering upon this subject it is essential that we should clearly know what the nature and function of an artery are.

An artery is a cylindrical tube of uniform diameter until a branch is given off. Arteries are destitute of any muscular character or property, although muscularity has been ascribed to them by some, and denied by others, to suit the alternate theories of contending schools. However, no difficulty will be found in determining the truth, one way or the other, by those who, if led into doubt by having studied them in small animals, will be at the pains of examining them in the large vertebratæ, as the whale, in which animal, according to its size, the aorta will be found from six to ten inches in diameter, and the elastic coat from seven-eighths to one and a third inch in thickness, as I have had several opportunities of measuring. This thick wall is composed of a uniform elastic substance, capable of distention by a force from within, which ceasing, the inherent and permanent elasticity of the wall enables the tube to contract back to its original calibre. For this elasticity has a limit both ways; it cannot by its contraction either thicken the wall on the one hand, nor diminish the calibre of the vessel on the other, beyond an established limit. Hence it results that, however much or little blood be injected by each ventricular contraction, this force cannot distend the artery beyond its elastic limit without bursting it; and however small the quantity thrown in, the vessel will be found always full, since its elasticity adapts the walls to the contents until this contraction has reached its term, beyond which it cannot go, and cannot obliterate the calibre, therefore leaving a column of blood always in the vessel.

The empty state of the arteries, commonly met with several hours after death, is due to a force operating elsewhere, greater than the

resilience of the elastic coat of the artery, but which will be accounted for hereafter.

The Pulse and the Second Sound.—When the ventricles contract they press their contained blood necessarily in all directions. One portion is forced back, as already mentioned, towards the auricles, carrying their valves along with it, by means of the current, to their limit, producing the *first* sound; the other portion, meeting with no resistance at the arterial orifice, injects a volume of blood into the arteries, driving onward the column already there, and, by the new addition, distending the calibre. This distension from within is sudden and proportionate to the ventricular force, creates the *pulse*—a phenomenon purely mechanical, and which may be produced artificially, by fixing a syringe to arteries removed from the body, or to the ordinary elastic tubing now so common, and is also manifest in the hose of a fire-engine at each stroke of the two pistons.

The Second and Lesser Sound.—The ventricular pressure on the column in the arteries ceasing, the distended artery, by its elasticity, in its turn, compressing the contained blood, forces it to move in the only two ways it can, forward and backward; this last is very partial, since the returning current carries the semi-lunar valves along with itself, until they reach their limit; now receiving a sudden check, which is the cause of the *second* sound, and necessarily the lesser of the two cardiac sounds, since their area is less than that of the auricles; and also, since the arterial elastic force is more gradual and wider spread than the concentrated muscular force of the ventricles.

This valvular check, by its sudden impediment to the return of the arterial column into the heart, causes a slight rebound, as it were, of the column, producing a second, though a very small pulse, but which is quite perceptible in certain states of the arteries, and by persons endowed with a delicate sense of touch.

The arterial current is a continuous one, by reason of the elastic nature of the vessels ceaselessly pressing on their contents, acting like that from the nozzle of the hose of a fire-engine, ceaselessly pressed upon by the elasticity of the air confined in the air chamber of the machine; but this current is augmented in force and velocity by each new injection from the ventricles; hence the striking *per saltum* flow of arterial blood.

Movement of the blood through the veins is produced by three distinct mechanical forces, and most probably a fourth one, that cannot be demonstrated as mechanical, but which is self-evident, and possibly a physiological one.

The first force acting on the movement of the blood in the veins is that furnished by the heart and arteries. The ventricular injection into the arteries, and the ceaseless pressure of the latter on the column, drives their blood through what are called the capillaries into the veins. This force was stated by Majendie to be the only one, seeing that the flow through a corresponding vein ceased when a ligature was tightened on the afferent artery, and was again renewed when the ligature was loosened. So far this is true at the *moment* of the experiment, but it leaves the subsequent facts unnoticed. This one fact is of easy corroboration, even on a dead vessel, by simply injecting the artery with an appropriate fluid. The immediate influence of the elastic arterial force is carried so far in some instances as to give the venous current a *per saltic* flow; as when, in hot weather, a person has undergone violent exercise: should in this case the arm be tied up, as for phlebotomy, the stream of the blood rushing through the orifice made in the vein, though continuous, will extend its arch at each arterial pulsation; the entry of the blood from the arteries is so free that some of the arterial blood will arrive into the veins unchanged, rendering the venous blood proportionately florid, or arterial. In cold weather, cold extremities, and cold stage of ague, the reverse is apparent.

The second force acting on the venous current is furnished by the pleural vacuum of the thorax. It not only draws air into the lungs and retains a large portion of this air in them, but it leaves still an unsatisfied vacuum in the thorax, to aid in filling which blood rushes into the cavas, and from the pulmonary arteries into their veins. This vacuum is constantly acting during life, after the cessation of respiration and the action of the heart, and for a long time after death—for days and weeks. This fact can be demonstrated in several ways; if two or three days, and even weeks after death, an opening be made into the pleural cavity, air will be heard rushing in until the lungs collapse (though they never do so completely).

In the winters of Canada an abundance of the best anatomical subjects are obtained frozen, and so kept until wanted, when they are thawed and used for dissection. It may happen that the thorax is not opened until after many days of dissection have been carried on; in this case, though the lungs by time have become semi-putrid and flabby, still the diaphragm is found arching high up into the thorax; if the diaphragm, or costal pleura, be now punctured, air will rush into the pleural cavity, the diaphragm will descend and become flabby, and the lungs collapse and recede from the costal pleura. In all these

cases the cavas and subclavians will be found filled with blood, and the anterior part of the neck dipping in under the top of the sternum. Should a long time have elapsed since death, the cavas will not be found so full; but this is owing to the trans-oozing of their serum into the tissues below. Now, since this vacuum is so powerful and persistent, it must be admitted to exist during life, and in this case to operate largely in inviting or sucking the blood into the thorax, first into the large sinuses, then into the next nearest veins, and again, the next beyond, to a great distance; and the atmospheric pressure on the surface aids in pressing the blood inward from the smaller to replace that drawn in through the larger veins. It is this vacuum that so largely aids the hepatic circulation—one that suffers no *vis-a-tergo* from arterial impulse.

If at the time of death the thorax be opened by wounds, &c., the cavas will be found only moderately full of blood, and not distended, as is the case when the pleural vacuum is maintained.

The third force that aids, but only slightly so, the flow of blood through the veins, resides in the expansion power of the auricles, drawing into them the nearest blood in the cavas, relieving their distension and affording room for the entry of blood from a distance beyond.

As yet it will be seen that the motive power, acting on the blood, is purely mechanical.

The fourth power or force, although evident and proveable, is not easily explained. Half an hour after death the surface of the body becomes mottled, by the presence of apparently stagnant, dark, venous blood; this takes place in the elevated parts of the body, even in the whole wing of the ear, as well as in the most dependent, long after the impulse of the heart and the elastic pressure of the arteries have ceased to drive their blood onward. If the ear or one of the mottled spots be pressed upon, the interstitial, apparently stagnant, black blood will be driven away, but will again return as soon as the pressure is removed. There is, then, a movement of the blood still carried on, and it will continue until the whole is removed from the skin, leaving it white in all the superior parts, and more or less whitened in the recumbent parts; for this force is not sufficiently active completely to overcome the force of gravity. Should death have been produced by hepatization of the lungs to a great extent, or to extensive empyema, the mottled state will persist for many hours—twenty-four or more; this will be, more or less, accounted for from the vacuum ceasing, either from the inability of the lungs to collapse, by reason of

their solidification, or the effusion filling the pleural vacuum to satisfaction.

How far the entry of the blood into the veins is aided by that peculiar adhesive property belonging to blood globules which causes them to follow each other in strings, it is unnecessary at present to remark upon.

Emptiness of the Arteries.—Since the elastic contractility of the arteries has a limit and cannot obliterate their calibre, they are always found to contain at least one quarter of their maximum quantity shortly after death—that is, after respiration and the action of the heart have ceased, which is not complete or absolute death. But after the body has become quite cold and rigid, they will be found empty of blood; and as neither air nor any other fluid has entered them to replace this abstracted quantity of blood, the arteries will be found not shrunk into round cords without a cavity, but as flat, thick, double tapes, one side touching the other. The power that draws the remaining blood out of them is so strong that it forces the cylindrical wall into flat proximity, in spite of the elastic resiliency that persists in efforts to restore the calibre. Should a cut be made in such an artery as to admit air, it will immediately, by its elasticity, resume its cylindrical form and open calibre, air rushing in to satisfy the vacuum that drew the sides together. It is such cuts into the arteries during autopsies that leave them round, hollow, and empty, and gave to them the name of artery, and the supposition that they were the carriers of air or spirit; and though this idea has been long exploded, the fact of their emptiness of material fluid leaves the subject still shrouded in uncertainty or unexplained. Kill an animal, by strangulation or any other means that does not wound the arteries, and suffer several hours to elapse to give time for the interstitial mortuary circulation to be completed; after which carefully lay bare the carotid, or the femoral artery, without opening it. It will be found to resemble the tape already mentioned; and if a cut be made into it, air will rush in, permitting the elastic resilience of the vessel to expand it into cylindricality. This admission of air will spread into all the large arteries, and even into the heart, from the same expansive cause, where its presence has not been mentioned as a pathological fact, while in reality it is only accidental. Should death be the result of wounds penetrating the arteries, they will of course be found round, hollow, and containing air. Should, at the time of death, the thorax be opened without wounding the arteries, they will for a long time retain a quantity of blood, as in the case of pulmonary solidification or empy-

ema, because the vacuum force of the thorax has ceased to draw on the veins.

The emptiness of the arteries and their flattening is then due to two forces—a vacuum and an interstitial circulation or movement; and because the pleural vacuum can with difficulty reach through the hepatic system to the mesenteric arteries, they are never found so completely empty as the arteries belonging to the extra digestive system.

*Milk—Its Composition and Changes.**

Increase of knowledge bears with it two inevitable consequences—mankind learns the art of adulterating articles employed for the wants and comforts of the race, and the means of detecting such adulterations. In this way, science bears along with it the weapons with which it can protect from the very frauds that an improper employment of its knowledge produces. It must, however, be argus-eyed in order to seize hold of the protean forms that such an improper use of its principles can assume, and in this way its votaries must be supplied with never-wearying diligence and enthusiasm. In nothing belonging to the ordinary articles of food shall we find more expertness evinced in the production of shameful adulterations, than in the simple substance *milk*; yet science has followed up these adulterations closely, and shown how they may be detected, and the citizens of our large towns be protected from them. The subject is now attracting some attention in our cities from the proper municipal authorities; and, with the view of bringing before the readers of the MONTHLY the present state of knowledge on this subject, it is proposed in this article to consider the subject of milk in general, promising in a future article to present a resumé of the different modes of detecting adulterations, and of estimating the value of milk. The treatises, whose names are given at the foot of this page, will be the chief sources from whence our material will be drawn.

Physiologically, milk may be considered as being composed of three substances: 1. Serum, holding in *solution* lactine, some casein and other proteic bodies, extractive matters and salts; 2. A second condi-

* DU LAIT EN GENERAL. Par M. Bouchardat et Th. A. Quevenne, Paris, chez Mme. Ve Bouchard-Huzard, 1857.

DU LAIT. Thèse soutenue le 23 Décembre 1856, par le Dr. P. O. Reveil, Pharmacien en chef de l'Hôpital des Cliniques, &c., &c. Paris: A. Lacour, 1856.

tion of casein in a state of suspension in the serum under the form of very minute granules: 3. Butter, which is suspended in the same liquid in the form of globules; the two latter give to milk its characteristic opacity. The different forms in which milk is sold, from the dairy, depend upon the presence of all these constituents or the abstraction of one or more of them. *Skim-milk* has been deprived of much of its fatty matter, though still containing "nearly all the cheese, the sugar of milk, some butter, and the salts of milk; it is therefore scarcely less nutritious than new milk, but, in consequence of the diminished amount of fatty matter, is less adapted to the development of fat, and to the maintenance of respiration and the temperature of the body." * *Butter-milk* contains still less fatty matter than skim-milk, while *Cream* consists of the fatty matter in combination with some casein and lactine.

Under the microscope the milk globules become visible. They are formed by the fatty matter, and are of different sizes. Two views have been held as to their constitution; that they are enveloped in a caseous membrane, and that they consist simply of butter swimming in a liquid precisely as oil in the case of an emulsion. Bouchardat and Quevenne hold to the latter view, and show that there are no enveloping membranes to these globules, and that the process of churning, which was supposed to consist in the disruption of the membranous coverings of the fat globules, is only an illustration of the fact that solid fatty bodies will agglomerate when floating in a liquid, should violent agitation be employed. Quevenne further sets forth the following facts as being very discordant with the existence of an enveloping membrane. If milk be exposed sufficiently long on a stove, the butter will unite in the form of oily drops on the surface of the liquid; if fresh cream be placed on plaster newly mixed, so as to ensure the absorption of the little serum left, it is only necessary to knead the remaining mass with a little water to remove the casein and to make the fat globules agglomerate in the form of butter; when milk is acted on by ammonia, which dissolves the casein that is suspended, and should also dissolve the enveloping membranes, the fat globules are not changed under the microscope. These facts go far to support the idea that these fat globules are devoid of organization.

The number of substances which make up the three physiological constituents of milk is quite large, some of which have been but lately discovered. It will be interesting for those of our readers who are

* Hassall's Adulterations, 205.

not familiar with the labors of modern chemistry, to see how complex is the composition of a substance generally considered so simple.

Butter is formed by the union of {
 Oleine,
 Butyrine,
 Caproine,
 Capryline,
 Caprine,
 Myristicine,
 Palmitine,
 Stearine,
 Butine,
 Lecithine, or phosphorous fatty
 matter.

All the substances obtained by coagulation through acids or heat have been considered, down to a late date, as a simple body under the name of casein.

{
 Albuminoid matter,
 Casein in suspension,
 Casein in solution,
 Albuminose.

Lactine,
 Phosphate of Lime,
 " Magnesia,
 " Potassa,
 " Iron,
 " Manganese,
 " Soda,

Chloride of Sodium,
 " Potassium,
 Soda in combination with casein, or some organic acid,
 Salts, with a potassa base,
 " with an ammonia base,
 Silicates,
 Fluorides,
 Sulphur,
 Iodine,
 Urea.

The four substances which constitute the proteic constituents of milk have only, within the last few years, been recognized distinctly. Albumen was formerly considered an abnormal constituent, and only present during disease or at the time of parturition. In 1841, Quevenne found something of an albuminous nature in milk, sometimes plainly coagulable by ebullition, though mostly only manifesting itself through a slight turbidity of the liquid. Mitscherlich, in 1847, announced to Quevenne that he had been enabled to prove the presence of this substance in milk. Doyère, in 1851, being ignorant of the results obtained by these experimenters, determined the presence of albu-

men in milk, and announced it in a paper published in the collection of the Agronomic Institute, of Versailles. His results were confirmed by Girardin, in 1853, and by Morin, in 1854. This *albumen* imparts to the watery portion of milk the property of forming flocculi directly by ebullition, or at least of becoming slightly turbid; and in this case the liquid will leave a deposit on the filter through which it has been poured.

Quevenne proved that a part of the casein was in a state of mechanical suspension. If fresh milk be poured on a double filter of tissue paper, the liquid which passes through has a lower sp. gr. than the milk itself. This proves that the material on the filter must contain something heavier than fatty matter. On analysis of the same, it is found to consist of butter and casein. The microscope will show in asses' milk this suspended casein, in the form of very fine granules of a peculiar aspect, soluble in ammonia and insoluble in ether. Bouchardat has also detected it in the milk of the cow. Donn  has confirmed these observations. This form of casein is susceptible of coagulation by the use of rennet, after the separation of the dissolved casein.

If we remove the suspended casein by filtration or the use of rennet, and the albuminoid material by ebullition and a second filtration, and then raise the liquid a second time to the temperature of ebullition, adding a little dilute acetic acid, there will be formed some white curdy flocculi which are due to the dissolved casein. This is not affected ordinarily by the rennet employed for the coagulation of milk in the manufacture of cheese. It is not coagulable by heat alone, although perfectly so when acids are employed.

After the removal of the three proteic substances just described, there still remains in solution a small quantity of another proteic substance. This is not coagulable by ebullition nor by acids, although it can be precipitated by tannin, and by alcohol. This receives the name of *albuminose*, or *peptone* according to Lehmann, or *galactine* according to Morin.

In addition to these four, there is no doubt but that there are other proteic substances, among which may be mentioned *oxolecine* and *anoxolecine*, so that the composition of the caseous portion of milk is really very complex.

Butter is the aggregate of the fatty materials, and that from each animal is possessed of some peculiar characteristic taste, odor, and appearance, differing from all the rest. That of the cow, in summer, is yellowish when the animals are fed on fresh herbage, and in winter it is paler, being nearly white. Goat's butter is of a paler

yellow, inclining to a citron. That of the ass is whitish, becoming occasionally of a pale yellow, and is without aroma, while that of woman is of a greenish yellow. It melts generally at 112° F.

In butter there is found a substance, called by Gobley *lecithine*, of a phosphorous character, which is analogous to the *oleo-phosphoric* acid that Fremy obtained from the cerebral fat. This substance is composed of phosphorus in direct combination, just as oxygen, hydrogen, and carbon unite in the formation of organic compounds. May not this *lecithine*, on account of the presence of phosphorus, be a most important constituent of milk, supplying to the young animal this important substance in a form readily appropriated for the uses of brain structure.

Bouchardat and Quevenne have detected urea in asses' milk, their attention being attracted by the appearance of a white crystalline powder which was deposited at the bottom of the vessel containing the butter made from this milk. Morin supposes that he obtained the same principle from cows' milk. Urea has thus been found in urine, sweat (Favre,) milk, chyle (Wurtz,) and in the liquids of dropsies.

Lactine can hardly be considered a true sugar, since it fails to undergo, in a direct way, alcoholic fermentation. Under certain circumstances, it undergoes such modifications as make it capable of transformation into alcohol. Thus, certain nomadic tribes are enabled to procure different spirituous liquors, such as the *koumiss* of the Calmucks, which is made from mares' and camels' milk, the *Pinna* of the Lapons. By the distillation of *koumiss* a brandy is obtained.

The salts contained in milk are quite numerous, and analysts have given different percentages as the result of their examinations. Regnault gives the following proportions in 1,000 grammes of milk:

Phosphate of lime.....	1.805
" magnesia	0.170
" iron.....	0.032
" soda	0.225
Chloride of sodium	1.350
Carbonate of soda.....	0.115
	<hr/>
	3.697

With these remarks on the nature of some of the constituents of milk, that are not particularly noticed in our text-books, and which are among the recent discoveries of chemistry, we propose now to consider the alterations or changes it undergoes from various circumstances.

Prominent among the alterations may be mentioned those depending upon the time of day the milk is withdrawn from the animal. In the morning it is denser and less rich in cream than in the evening. After having been skimmed, it still shows a little greater density, although it retains more cream than skimmed evening's milk. The morning's milk, according to Schubler, furnishes the most butter, that of noon the least, and of evening an intermediate amount.

Milk taken at different periods during the milking also differs in its constitution. At the beginning it contains less cream than at the end. Parmentier and Deyeux show that where an animal is employed to furnish milk to several persons, the amount of cream obtained by each differs. The first will get milk most abounding in serum, and the last that which is richest in cream. Reizet has shown, that in order such a difference should be found, the milk must have remained more than four hours in the mammæ, and that if the operation of milking be performed every two hours, this difference between the composition at different periods in the milking is not observed. At first glance, one might conclude, that as the milk which is first drawn is poorer in cream than that which is obtained afterwards, the same sort of separation of cream from milk takes place in the mammæ as when the liquid is at rest in an unorganized vessel. On the other hand, however, it will be found that in the case of the goat, where the bag is pendant like that of the cow, but slight difference as to richness in butter can be detected between the first and last milk of any particular milking, while in women, although the mammæ are horizontal, the milk shows the same difference as in the cow.

Influence of Food on the Milk.—Certain kinds of food affect to a great extent the nature of the milk, and even impart to it a peculiar odor. Garlic and the cruciferæ give it their characteristic odors; artemisia makes it bitter, and madder communicates a reddish hue after a few days' use. A large number of mineral substances pass from the system in the secretion of milk, such as common salt, iodide of potassium, bi-carbonate of soda, while the milk of those under mercurial treatment affords, according to Personne unmistakable evidences of the presence of mercury. Reveil had detected the presence of mercury in goats' milk when they were fully under the mercurial influence, but Personne discovered it when it had only been given in therapeutic doses. "The importance of this fact may be understood in the treatment of syphilitic affections of young infants; it will suffice to administer the mercury from animals; the metal thus *dulcified*, as we may say, by contact with the milk, is better supported by infants; and for some time

past, Damoiseau, the conscientious *nourisseur* of the boulevard Pigale, has been administering mercurial preparations to some she-asses which he keeps for the use of the public."

The milk of animals supplied with vegetable food contains always, in variable proportions, the four kinds of materials which make up the food of the herbivora, viz., albuminoid materials, represented by casein; fatty matters, represented by butter; saccharine substances by sugar of milk; and salts of divers kinds that exist in all the tissues and fluids of animals. There is great diminution, however, of lactine in the milk of the carnivora. The milk, even in this case, corresponds in its constituents with those of the food employed.

The food also in woman controls the nature of the milk secreted. A good illustration is afforded in a case cited by Doyère. A nurse, aged 45, was nursing two large children, her own being 17 months old. Her food was nutritious during the first three days of each week, but during the four days following she was obliged to eat bread and peas, and these in quantity not sufficient to satisfy her hunger. Two analyses of the milk, made on Tuesday, gave as a mean:

Butter	75.20	} 162.70
Casein	6.30	
Albumen	5.70	
Sugar ..	74.00	
Salts	1.50	
Water	837.30	

The mean composition of two specimens of milk from the same woman, taken on Saturday, was as follows:

Butter	50.90	} 138.30
Casein	4.10	
Albumen	11.00	
Sugar	70.50	
Salts	1.80	
Water	861.70	

The first day of the year the woman went to the relatives of her foster-child, and after having fared well all day, she dined in the evening and passed the limits of sobriety. The following day she was very much fatigued, and her milk gave the following composition:

Butter	41.00	} 127.70
Casein	2.80	
Albumen	3.90	
Sugar and Salts	80.00	
Water	872.30	

In the experiments of Simon, Doyère, Vernois, and Becquerel, two

circumstances appear as constant; 1, there is great diminution in the butter under the influence of defective alimentation or following excesses at the table; and 2nd, this diminution involves a diminution in the total weight of all the solid constituents. Boussingault and Le Bel conclude, from their experiments, that the nature of the food does not exercise a very marked influence on the quantity and chemical constitution of the milk, provided cows receive proper nutritive equivalents of different kinds of food.

Colostrum.—This name is given to the milk which is secreted a few days before and after parturition. It differs from normal milk in that it is rich in albuminous material, contains little or no casein, and coagulates by ebullition. Its properties were first studied by Van Strip-tian and Bondt, and afterwards by Parmentier and Deyeux. Lassaigue found that, for forty days before parturition, cows' milk contained only albumen, without any casein; ten days after parturition it became slightly sweet, and that it then contained all the ordinary elements of milk plus a small quantity of albumen. The density of colostrum is from 1052 to 1062. It often contains streaks of blood, and, examined under the microscope, it presents peculiar globules, composed of mucous and fatty granules, the latter soluble in ether, and the former in acetic acid. Colostrum putrefies rapidly when exposed to the air.

An important question connected with the changes which the colostrum undergoes in becoming true normal milk, is at what age it can be considered as fitted for alimentation. Bouchardat shows that it is right to believe that nature, in modifying the character of the milk in the mammalia, conforms its composition to the successive changes which are taking place in the organs of the infant, so that the first milk, the colostrum, is best suited for the latter at the period of birth, and the milk undergoes alterations in harmony with the necessities of the system for a more substantial aliment. If we wish then to obtain milk for a new-born babe, it will be prudent to take that from a *fresh* animal, continuing the use of milk from the same, since it will become daily more nutritious. "For an invalid whose digestive organs are in a state of extreme debility, we should, in accordance with the same reasoning, employ the milk of an animal that had calved recently;" and when the digestive organs are not specially affected, the more nutritious milk of greater age should be used. These points have not attracted the attention of hygienists to the extent the importance demands. Cows' milk should not be employed as an ordinary article of food until three or four weeks have elapsed from the period of calving;

it may then be considered as normal and suited for such purposes. Still, even at that time, it will not abound in the unctuous property and savory taste which it will possess at the age of six or eight months.

The effect of brewers' grains and still-slop, which are largely employed as articles of food for cows in our cities, upon the quality of milk, is undoubtedly detrimental. Whether the milk derives any special injurious substances, in addition to its loss of those which are beneficial, we are at present not able to state. One thing is sure, that the milk which is secreted under the stimulation of this kind of food will not present the same amount of solid constituents as that obtained from cows whose food has been of a better quality; and further, we have the right to conclude that any food which will beget disease eventuating in death must necessarily vitiate all the secretions of the body. The secretion of milk is affected by very slight causes indeed. Moral causes may so affect it in the woman as to make it really a poison to her babe. Vernois and Becquerel found the proportion of butter to be reduced from 23.79 in 1,000 grammes to 5.14 in consequence of grief on the part of a nurse. This portion of the subject needs especial study; and if some of our microscopical chemists will devote themselves to the nature of the alterations produced by improper food, and disease on the secretion of milk, discoveries may result that will be of the greatest utility to society. The question is attracting the attention of the non-professional, as well as that of those who belong to the ranks, and it becomes the latter to make some effort at obtaining a rational and satisfactory solution of it.

One important point in the consideration of this subject is the question, whether milk can be preserved for a long time after its removal from the cow. Appert, at the beginning of this century, endeavored to ensure its preservation by concentrating it, and then keeping it in closed flasks. Several other methods have been proposed in Europe, and have succeeded to a certain extent. In this country two methods have been used with reference to its preservation. The first, by Blatchford, of New York, depends upon the admixture of 125 pounds of milk with 25 pounds of sugar, and then exposing it to the action of heat in order to drive off the aqueous portion. The solidified mass can be preserved for years without any notable change. A block of this milk has been in our possession for four years, and is as good as when first made. The presence of the sugar is an objection to its use with some persons. The other American method is that of Gail Borden, Jr., which consists in carrying on the evaporation in a vacuum, without the addition of sugar or any other substance, until the milk is either

highly concentrated, (as when required for use in a few days,) or absolutely consolidated. This is the better method, and commends itself to the consideration of the citizens of our large cities, as a reliable way of getting pure milk, freed from the adulterations which too often exist in our city *milk-cans*.

L. H. S.

NAPLES, February 22nd, 1858.

To the Editors of the American Medical Monthly:

GENTLEMEN:—If the urgent demands of country practitioners for cases and prescriptions will not forbid you to spare a place in your practical journal, where the value of words is weighed by the ease with which they will cure a fever, or the use to which they may be put in the next epidemic, I would request it for a little idle gossip about matters in this oldest of empires, which, as they have interested me, may perhaps at least amuse your readers, although they shall not furnish a single idea on the practice of medicine. I propose to throw together the results of a little cursory observation of things interesting to a professional traveller in the course of a brief tour through Italy. In medicine, as in every science and every art, the traveller is at once impressed with the patent fact that Italy is retrograding; that she is not now what she has been; that, travel where one will through her fair domain, he finds, in the midst of all her beauty, ruined palaces, shattered monuments, deserted cities—that, as once noble structures were erected here in the minds of thinking men as they pondered on the mysteries of the wondrous mechanism of their own bodies, and the many and strange derangements to which it was liable, so *now* the national mind is but a vast waste, with here and there a ruin to tell of great intellects long since gone.

But it is not to be forgotten, that as to the relics of her departed glories we look for our fairest models in architecture, our noblest masters in the arts, so from her we have derived much of the knowledge of our own science, many of the refinements of our own art, which she has suffered to pass from her, while we have made them our own. Italy, the mother of the arts, has not now an artist worth the ivy, and Italy, the seat of medicine, boasts not a physician whose name will live beyond himself.

As to the general traveller, few spots in this interesting country possess a stronger interest than the long buried city of Pompeii, with its deserted, and yet strangely new and habitable streets; so the physi-

cian finds few places where he feels more inclined to linger than in the surgeon's house, in this city of the dead. I know no reason why the establishment should be conceded, as it universally is, to our brethren of the knife, for medicinal preparations were discovered there as well as surgical instruments. The probability is, that the worthy man who formerly inhabited this snug little domicile, and, his night-capped head full of Alexandrine love, answered the nightly raps on its door from his second story window, (there was but one dwelling in all Pompeii which appears to have had more than two stories,) united the two branches in his solitary person, as is now the custom in all our country towns; and that, moreover, he added to these functions that of being his own apothecary; for not only were tablets and spatulas, but even the ready-made pills discovered in his office, as well as neat little scales, balancing to a fraction, with weights on which were inscribed on the one side, "*eme,*" *buy*—on the other, "*habebis,*" *you shall have*—a gentlemanly way of stating to his customers that the *cash* system prevailed in his establishment. But it was fitted up in front with a marble counter and a small set of marble shelves, arranged like steps, on which to array his wares. The small dimensions of his house sufficiently indicated that, like his brethren of to-day, the physician in Pompeii did not find, that even with his practice among lordly *equites* and rich patricians, his fees sufficiently overbalanced his expenses to enable him to live in a palace; and when it is said that his dwelling does not stand on the street of fortune, it will be understood that he was not a Fifth Ave-noodle.

Although there is internal reason for believing that the rouge pot found in the toilette chamber of the beautiful Julia, daughter of Diomedes, the impression of whose voluptuous breast may still be seen in the hardened mud taken from the cellar of her father's house, wherein the family had sought refuge from the fearful storm; although I say there is reason to believe that this rouge came from his shop, and that, like men of the pestal now, he lent his genius to aid the charms of the sex, let us hope that the purity of his marble shelves was not sullied, as it might have been had he lived in our enlightened day, with the presence of other and more dangerous nostrums, the inventions of Roman Holloways and Jaynes.

The instruments discovered in this house are to be seen at the Bourbon Museum, in Naples; and for myself, having never seen a description of them, I was really amazed at their perfection and beauty of finish.

A work is now in process of preparation under the Royal auspices,

in which all the objects of interest in this most interesting Museum will be represented by fine engravings. This part of the collection has, however, not been reached, and I am not aware that there are any engravings published of these very remarkable relics. Through the politeness of the *custode*, I was permitted to take some hurried sketches of the more important ones, which, imperfect as they are, may still serve to give an idea of the originals. The largest and most interesting among them is a *Uterine Speculum*; and the ocular evidence that this much vaunted and certainly invaluable *modern* discovery was in familiar use, and carried to so high a degree of perfection so many years ago,* is almost enough to make the boastful spirit of Young Physic bow its head to the superior wisdom of the wise man, and exclaim with him, "nothing new under the sun."

As the drawings of the plate are in perspective, a little explanation may be necessary to make them understood.

(A,) the *Uterine Speculum*, is composed of three blades or valves, (*c, c, c,*) each attached at a right angle to a separate handle, (*a, a, b.*) Of these handles, two (*a, a,*) are curved, and correspond precisely to one another, passing through the sliding piece (*d,*) to which the third handle (*b,*) is attached, and having their fixed point at (*e,*) a stationary crosspiece through which passes the third handle, which is, in fact, for the greater part of its length a screw. It will at once be seen that as this screw, acting from the fixed point (*e,*) increases or diminishes the distance between it and the slide, (*d,*) it at the same time, in consequence of the curves of the two other handles, increases or diminishes the space contained between the three blades; and so nice is the adjustment of these curves, that the distance of each blade from the other two is increased or diminished to precisely the same extent, thus ensuring an equal pressure in every direction.

When brought together, they form a single round shaft about the thickness of the little finger, and having, it will be noticed, much the shape of the nozzle of an enema syringe. Separated to their fullest extent, they enclose a space of about two inches. The length of the blades is from four to five inches. (They are seen much foreshortened in the plate.) That of the handles about twice as great, so that the hand of the adjuster would in no way interfere with the view. The delicate adjustment, ingenious conception, and practical adaptability of this instrument, cannot fail, I think, to impress every one who sees it.

Analogous to this is the Anal Speculum (*B,*) with its two blades,

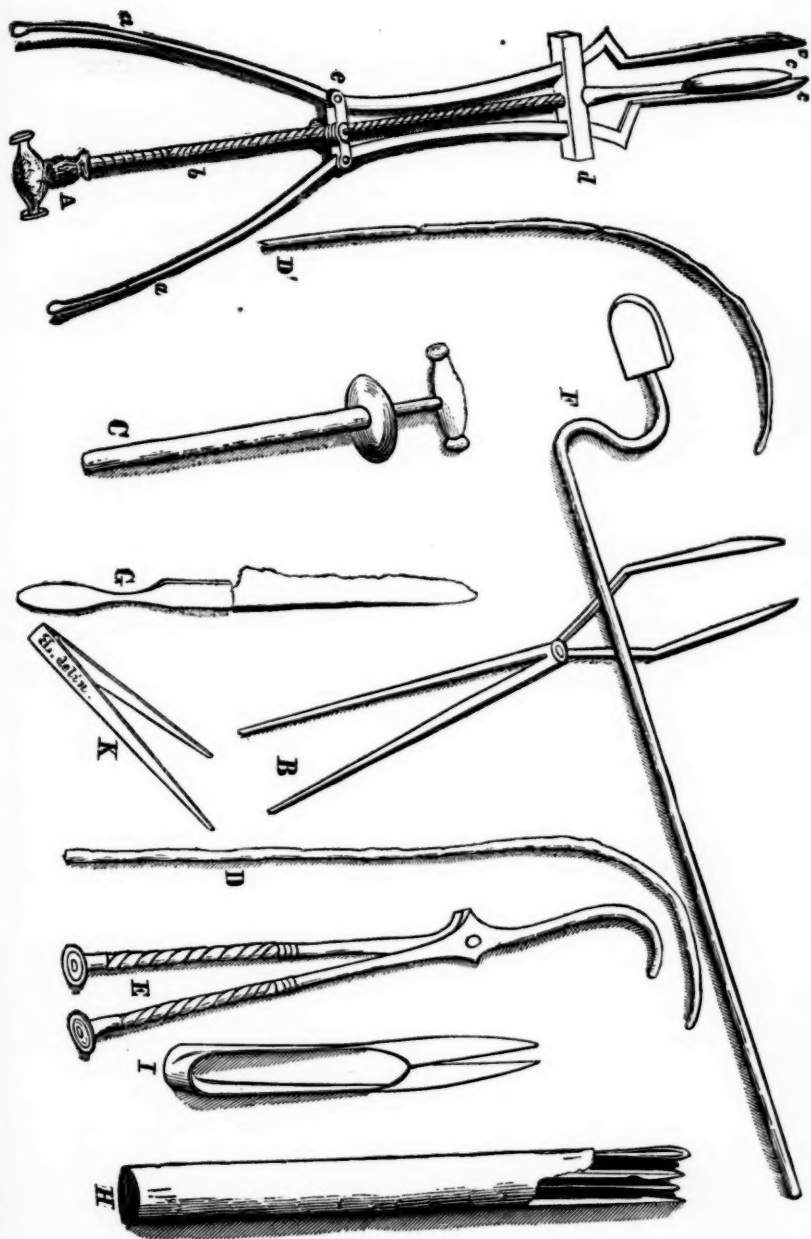
* The eruption which destroyed the city, occurred in the year 79 of our era.

(*a, a,*) also at right angles to their handles. (*C,*) called the trochar, has its sheath of silver. Its extremely small orifice would lead to the supposition that it might have been used for somewhat the same purpose as that to which the small exploratory trochar is now put, viz., the evacuation of cavities into which it is important to prevent the introduction of air, although its large calibre would hardly seem to countenance the idea. (*D,*) a specimen of a large number of sounds and catheters, some of them of silver. Of these, one (*D'*) struck me as resembling not a little, in its careful graduation and slightly bulbed point, Prof. Simpson's uterine sound. The occurrence of these strictures at such regular intervals can hardly be attributed to the chance work of time and corrosion, although they have doubtless increased them. The forceps (*E,*) are furnished with serrated teeth, the modern bull-dog forceps, and were probably, like them, used for taking up vessels, as their point is quite fine. The cautery (*F,*) is so like those now in use, or I should perhaps more truthfully say, those now in use are so like it, (for this article has probably been more or less in use constantly from that time to this,) as to need no comment. The *Scalpel* (*G,*) has a blade of wrought iron set into a bronze handle, and in this respect, as well as in its general shape, is a model of all their ordinary knives. Their size, of course, varies. I saw none larger than a small amputating knife; a thumb lancet preserved its point, and appeared to have quite a good edge, and the shape of a gorget was too perfect to allow it to be mistaken. The pocket case (*H,*) contains a lancet, a small scalpel, needles, and probes of different shapes; on the left, one is seen with a scoop, another might pass for a grooved director, although there is not enough of it visible to be able to assert it to be one. A third, I took for a female catheter. The scissors (*I,*) and thumb forceps (*K,*) will readily be recognized. If the existence of this ancient speculum throws some light upon the treatment of uterine disease among the Romans, there is, perhaps, also a hint to be gained from certain other relics of this collection. I refer to the theatre tickets of bone or ivory, the value of which did not end with the simple theatrical representation, and which bear the singular device of an eye within a vulva. Would not this seem to indicate that if the foul malady, of which our own land is credited with the origin, did not then exist, there were still certain consequences of promiscuous intercourse against which the cautious but voluptuous Roman thought well to guard himself by ocular inspection?

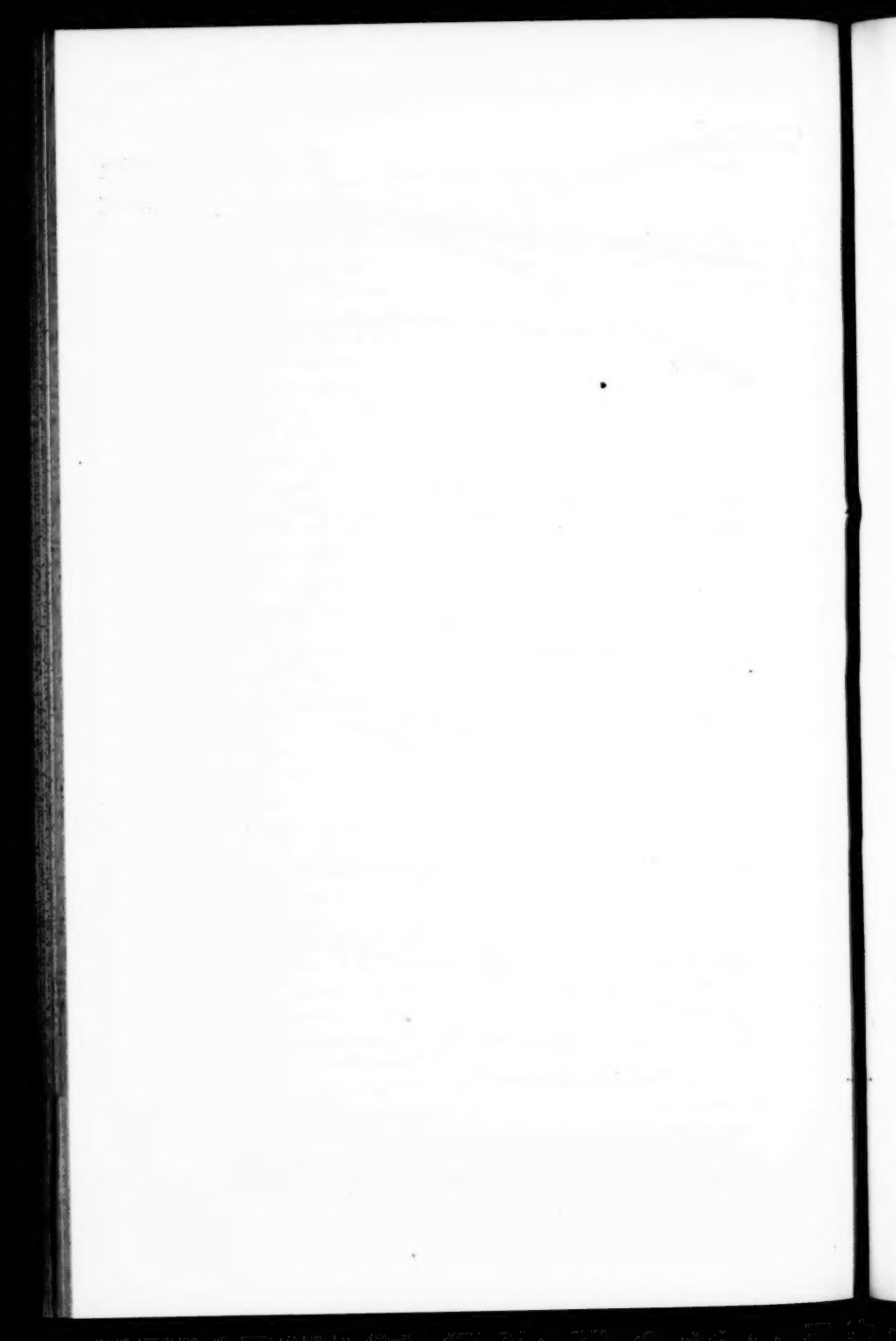
Should you find space for this, gentlemen, I will endeavor to follow it by another, as objects of interest present themselves.

With great respect, yours,

BENJAMIN LEE, M.D.



SURGICAL INSTRUMENTS FOUND AT POMPEII.



ROME, *April 1st*, 1858.

MESSRS. EDITORS:—In my last I gave some account of the instruments found in the surgeon's house in Pompeii. The traveller, who, as is proverbially the case with Americans, is pressed for time, may spend a morning in this "city of the dead," and taking the cars in the afternoon, be whirled along at the rate of seven miles an hour to the town of La Cava, where, if he be fortunate enough to escape with his life from the clutches of the clamorous vetturini, of whom New York hackmen are as it were but a faint foreshadowing, a ride of two hours along a magnificent mountain gorge, (in the course of which he will see women and children down to 7 years of age, boys and girls, at work on a railroad, carrying stone and dirt on their heads,) brings him at dusk to the famous town of Salerno, the only point south of Naples which possesses any particular historical interest to the physician.

There is nothing whatsoever, at present, to tell of its former pre-eminence as a seat of medical science, although it still boasts a small University—and its Cathedral, within whose sacred walls, rich with heathen trophies, the bodies of reverend Archbishops quietly repose in Sarcophagi, covered all over with reliefs representing the triumphs of Bacchus and Ariadne, and the Rape of Proserpine, is the only thing to remind one that it was once a populous and flourishing city, although its admirable situation at the head of the beautiful bay of the same name would have ensured its being so at a time when the entire country was peopled with an active, industrious, and enterprising population.

Flourishing, however, as was its commerce, and great as was its military renown, it was to its medical college that it owed its greatest fame. This institution was visited by students from all parts of Europe, and was, in fact, at the time of its greatest glory, at the close of the twelfth century, what the school of Paris is to the modern medical world. Indeed, that good old divine, Thomas Aquinas, assigns it in his day the same rank in medical science that Paris then held in general science, Bologna in law, and Aurelianum in letters.

The course of study appears to have been a very thorough one—a seven years' attendance upon its lectures being requisite to graduation, as well as a public examination before the assembled learning of the city in the works of Galen and Hippocrates, the medical classics and text-books of the day.

One requirement there was, which is a strange comment on the manners of the day, and which it is to be feared would somewhat diminish the number of French students were it at present in force at Paris,

viz., a proof of legitimacy of birth. If the newly graduated physician intended practising in the city of Salerno itself, it was necessary for him to follow first for one year the practice of an older physician.

They had, too, even in those remote days, what is so greatly needed among our enlightened selves—a law forbidding any man to dispense medicines as a druggist who was not furnished with a diploma from the college, testifying to his having followed a regular course of study. But, alas! how are matters changed there now! In all that town of 16,000 inhabitants could I not find an apothecary who knew what *Tinctura Opii* was. The dogmas of the school were at one time rendered into Latin doggerel, and dedicated to Edward the Confessor, King of England.

The following translation of a quartette in praise of an article of the *Materia*, which is now scarcely so highly esteemed, would seem to indicate that the Faculty of Salerno were as fond of Tisanes as that of Paris:

"Why does man die while sage grows for him in the garden?
Is there not a remedy against death in the fields?
Salvia! Salvation! Nature's mediator!
Salvia with *Ruta* will make thee a safe potion."

Another of these aphorisms might convict them of a leaning to Homeopathy. It is, in fact, a little singular that some smart quack among the Infinitesimalists has not adduced it in proof of the antiquity of their ideas. It certainly has its followers in our day, whatever may be the opinion of the schools upon it. It runs as follows:

"*Si nocturna tibi noceat potatio vini,
Hoc ter mane bibas iterum et fuerit medicina.*"

Which may be modernly rendered:

"If you feel yourself worse for your last night's wine,
Drink it thrice o'er this morning, and be that your medicine."

A ride of wonderful beauty northward along the coast from Salerno, brings us to Amalfi, perhaps the most picturesque town on the whole coast. On the elaborate fountain in front of its magnificent cathedral is a Latin inscription which claims for the place the honor of the discovery of the mariner's compass, an assumption which, for hundreds of years, was granted to it without dispute. Modern research has proved that it was in use at least a century before the supposed time of its discovery here, by the Arabs in navigating their "ships of the desert;" but it is not at all improbable that the commercial rela-

tions of the Amalfitans with the Eastern nations, which, at a time when the Republic could send out its fleet of 100 vessels, must have been very extensive—may have put these hardy navigators in possession of this valuable discovery at a much earlier period than that at which the more remote nations of Europe became acquainted with it. At the base of this fountain is the rather quaint device of a female figure with a stream of pure water gushing from both the founts, whence the young of the genus derives its nourishment—probably intended to indicate the readiness of the city to supply the wants of her children.

In the crypt of the cathedral itself, which is gorgeous, with marbles and precious stones to an extent scarcely equalled by any in Europe, is a singular manifestation of superstition, consisting in a large number of casts and models of the female breast in wax and plaster, suspended around a favorite altar to the virgin mother as votive offerings from women who have passed safely through the perils of child-birth.

A few hours' ride from Naples along the opposite shore of the bay from Vesuvius, and through the ancient tunnel, or grotto as it is styled, of Posilippo, brings the traveller to the town of Pozzuoli, the Puteoli at which St. Paul terminated his perilous voyage; and here are found the ruins of the temple of Serapis, one of the most interesting and remarkable relics in all Italy. It possesses two points of scientific interest; first, as indicating in an unmistakable manner and with great precision the alterations in the surface level along the coast of the bay from volcanic action; and secondly, as being the site of mineral springs. The tablets on which the records of this first remarkable phenomenon have been inscribed, are the three beautiful columns of Cippolino marble, which still stand by the site of the altar in the centre of the building, and the tops of which, jutting above ground in a palace garden, first led to the excavation of the ruin.

For the first twelve feet above the pavement they are quite smooth; above this point, for a space of nine feet or more, this surface has been bored into and honey-combed by a species of shell-fish which still exists in the waters of the neighboring bay, their shells being found at the bottoms of the holes; above here again is a zone, which indicates that the surface has been worn by the action of the waves, while the remaining portion merely indicates exposure to the weather. The naturalists and antiquarians of Naples, who have given this matter the most careful study many years past, consider that, in order to the production of such considerable results by these little animals, the columns must have been submerged for nearly three hundred years. The pro-

tection of the lower portion from their attacks, they account for by supposing that previously to the sinking of the site of the temple they were covered to this height by ashes and lava, from the eruption of the volcano of Solfaterra, which lies immediately behind the temple, and which is known to have been in action at the close of the twelfth century.

At present, the floor is again slowly sinking; for while fifty years ago it was perfectly dry in calm weather, it is now covered to the depth of 12 to 15 inches with salt water, so that a narrow brick causeway has been built in order to enable visitors to reach the site of the altar in the centre.

The second point of scientific and especially of medical interest, is the mineral springs which they contain, and which have been built in for use, as baths. There are three of them—two cold, and one hot; and there is little doubt that they have their source in the afore-mentioned nearly extinct volcano, a small part of which is, in fact, still emitting a stream of vapor from the mouth of a small cavern with very considerable force, and on approaching it very closely a lurid tint may be seen in the rushing steam, which plainly indicates reflected fires below. The constituents of the different springs do not differ materially. Analysis determines them to consist of the carbonates, sulphates, and chlorohydrates of the alkalies, with carbonate of iron, carbonate of soda being in great excess.

The hot spring, of which the temperature varies from 103 to 110° F., is the only one which is employed remedially to any extent, and its reputation in the treatment internally of dyspepsia, gout, &c., and externally of rheumatism and diseases of the skin, is very considerable. Pliny, whose uncle, the naturalist, it may be remembered was killed by the same eruption which destroyed Pompeii, in consequence of approaching too near in a galley in order to assist the flying citizens as well as to observe more carefully the phenomena of the eruption, describes the springs as on the north side of the Crater of Solfaterra, which still exists under their ancient name of Fontes Leucogei, from the white albuminous deposit which they leave upon evaporation. They are of boiling heat, contain principally the sulphates of alumina and lime, with sulphureted hydrogen, this latter constituent impregnating the air with that good "old particular" smell for a considerable distance around. In Pliny's time it was used for diseases of the eye, but the Lazzaroni of Modern Naples resort to it in numbers for the cure of diseases of the skin. In fact, as might be supposed in a neighborhood where the entire crust is underlaid at no great depth by

fires of molten stone, (indeed, in the Crater of Solfaterra there is a point where, if a heavy stone be dropped on the ground, it resounds as when the top of a hollow cask is struck,) and where, consequently, these subterranean laboratories have formed immense deposits of the salts; mineral springs, both hot and cold, abound in every direction. If we follow along the coast after a short detour, to visit the Lake of Avernus, now stripped of all its horrors, although the pebbles of pumices floating along its shores still give it a little of the preternatural, and pass the Lucrine Lake, whose oysters that jolly epicure, Horace, has made immortal, while even the elegant and refined Cicero did not disdain to speak a word in their praise, (though having made a trial of them, I can say with perfect confidence that it was never the good fortune of either of these gentlemen to have a fat bivalve from the waters of the Chesapeake glide soothingly over his palate,) we come to a number of ruins of considerable extent and beauty, which, although called temples, are generally considered by antiquarians to have been baths, and the idea would seem to be supported by the fact that a mineral spring at present bubbles up in one of the chambers.

Farther on are baths known as the *Bagni di Tritoli*, a name which they are supposed to owe to their former reputation in the cure of the tertian type of the intermittent. Climbing the side of a hill close by, we enter a narrow mouth, a chamber in its side, filled with warm vapor, from whence a passage is seen running in towards its centre. I penetrated this narrow way for a short distance, but the heat and density of the vapor soon made respiration so difficult that I was obliged to beat a hasty retreat to the open air. It terminates in several large deep wells of hot water, and, with other similar ones, constitutes the celebrated vapor baths of Nero, of which the satirist, Martial, says:

“What worse than Nero?
What better than his baths?”

High praise, if he mean that the virtue of the one were proportionate to the vice of the other. They have been in use at different times, even as late as the seventeenth century, for the treatment of chronic rheumatism.

The City of Naples is very rich in hospitals, having, it is said, as many as sixty institutions for the relief of suffering and cure of disease. It is very certain that no city has greater need of them. The only one which I visited was the “*Casa Santa degl' Incurabili*,” or Hospital for Incurables, although it did not appear to me to be confined to this class of patients. It is of ancient date, having been

founded more than three centuries ago, and more recent benefactions have made it extremely wealthy. Its affairs are managed by a President and Board of Governors, appointed, as is every official, public or private, in Naples, by the King. It is an enormous institution, capable of containing 2,000 persons, and its capacities often tested. But a more ill-managed, wretchedly arranged, and disgustingly dirty establishment, I never visited. I was conducted into and shown all over it without a word from any official to the contrary, but by a little beggar boy whom I picked up in the street to show me the way to it. Its wards are of immense length, exceeding those of La Charité, in Paris, and cross each other at right angles in the centre, thus virtually converting two wards into one, and placing at least 200 patients in precisely the same atmosphere, with very poor arrangements for ventilation. This is especially true of the syphilitic wards, which are very extensive, (in fact one of the synonyms of syphilis is "Mal de Naples," or "Naples evil,") and situated almost entirely below the surface of the ground, the light and air entering only at the top of the low windows. The floors are of brick, and instead of being scrupulously waxed like the tiles of the Paris hospitals, look as if the virtues of a broom even, were unknown to them. In many places they have sunk into hollows which make convenient receptacles for the dirt which the attendants are too lazy to remove.

The state of the children's wards was especially disgusting, filthy water and urine actually standing about in pools that looked semi-stagnant. The basement wards of Bellevue in their palmiest days never possessed such horrors for the nose as this entire establishment was redolent of. Phthisis, which is here considered as contagious, is treated in separate wards. There is likewise a separate ward, to which, until within a few years, patients who were seen to be near their end were sent to die in each other's company. This outrageous practice seems at present to have been abolished, but I was enabled to discover the ward which had been so appropriated, by the inscription over its door, "Blessed are the dead who die in the Lord!" It will interest all good Catholics to know that whatever the physical condition of the inmates may be, the spiritual wants are not neglected, there being a confessional in every ward. There is a small Museum of pathological preparations attached to the hospital, which I must not neglect to mention, if only for the sake of stating the fact that its *custode* refused "*buon mano*," it being the only case that I met with in Italy.

The School of Medicine here takes rank after that of Florence among the Italian schools; but I was unable to learn anything of its

condition, or of the practice of the hospital, save that the barbarous method of treatment of *Tinea Capitis*, by "Calotte," (evulsion of the hair by means of plasters of pitch or some other strongly adhesive substance,) is still in vogue there. A few notes on the Pontine marshes and medical matters in the imperial city I must reserve for another letter.

BENJAMIN LEE, M.D.

Report of Cases occurring in Bellevue Hospital, N. Y. By J. M. FAR-
RINGTON, M.D., House Surgeon.

Fistula in Ano.

CASE I.—J. D., a Scotchman, æt. 47, a carpenter, of good constitution but of intemperate habits, was admitted to the Hospital Nov. 5th. He stated that eight years previous an abscess formed to the left of the anus, which was opened. An opening had remained at this point ever since, and by it were discharged mucus, pus and flatus, but no feculent matter. Below this opening, at the distance of an inch and a half, was a second one, with which it communicated. Careful and thorough examination failed to discover an internal opening to the fistula, although it was believed to exist, from the fact of the escape of flatus from the external opening.

The general health of the patient was good; no cough, bowels regular, and appetite good. On the 21st Dr. Wood operated, by making the fistula complete and cutting it out into the rectum. The parts were dressed daily with dossils of lint, the wound filled finely by granulation and cicatrization, and the patient was discharged cured on the 22d of December.

CASE II.—A. F., a native of Scotland, æt. 30, a stone-cutter by occupation, of good constitution and of healthy family, was admitted to the hospital January 20th. He presented an anæmic appearance, and stated that he had been suffering from intermittent fever, though he had had no attack during the five weeks prior to his admission. He had a fistula opening externally on the left side, and about an inch from the anus, and communicating with the rectum at about the same distance above. He had suffered from external hæmorrhoids for more than two years. This fistula began to form about six weeks prior to admission; the hæmorrhoidal tumors came down at that time, and were replaced by the application of ice; soon after which an abscess formed, which opened spontaneously at the site of the fistula. He had no cough, and, as previously stated, no hereditary tendency to

phthisis. On the 23d Dr. Wood operated in the usual manner, the dressings were applied, he went on doing well, but on the fifth day after the operation the patient eloped, and nothing further was ever learned of his case.

CASE III.—R. H., *æt.* 35, a native of Ireland, a clerk, was admitted to the hospital February 22d. He was pale and feeble, and presented the appearance of one in an advanced stage of phthisis. He had a complete fistula in ano, opening externally on the right side of the anus, and internally about two inches up the rectum. His father died of consumption at the age of 54; his mother, aged 84, was still living. He had lost no brothers or sisters from phthisis. Two years before his admission he had an attack of hæmoptysis; he coughed up a large amount of blood, and was confined to his room for ten weeks, the sanguineous expectoration continued during the greater part of his illness. He had, at that time, nocturnal sweats. It is probable that his illness was a severe attack of pneumonia. He recovered entirely from its effects, the cough and the night sweats left him, and he had had none of the former since; but the night sweats came on again about three weeks prior to his admission, and were still very depressing in their effects. He had suffered from both internal and external hæmorrhoids for the last fifteen years, but during the past four years they had been particularly troublesome. The discharge from those within the rectum had been copious and bloody. He had taken many remedies and used stringent enemata, and they were much better than they had been, and did not require any further treatment. For the previous two years he had enjoyed good health, excepting the annoyance given him by the hæmorrhoids. Examination of his chest revealed no evidences of disease. Six weeks before admission an abscess formed on the right side of the anus, which opened spontaneously at the end of a month.

In consequence of his debility and colliquative sweats he was put upon the use of tonics, viz, cod-liver-oil, iodide of iron, and vegetable bitters. Extra diet was also ordered. His improvement was gradual but marked. His appetite soon became better, the colliquative sweats left him, his color and general appearance showed a marked favorable change. On the 3d of April Dr. S. Smith operated, by laying open the neck of the fistula into the rectum. The patient went on doing well until the 19th, when he asked for his discharge, the wound at this time being nearly closed, and his general health good.

CASE IV.—M. McE., an Irishman, *æt.* 37, a laborer, of intemperate habits, came into the hospital on the 18th of March. He stated

that in September a large abscess formed on the left side of the rectum, which, at the end of four weeks, opened spontaneously, and discharged a large amount of matter. It continued to discharge for several days, when it closed, but in a few days reopened, and had continued open and discharging ever since. On examination, there was found an extensive solution of continuity, having the appearance of the walls of a large abscess that had been laid open. It was on the left side of the fissure of the nates, parallel with it, and three inches in length. The upper portion of the wound communicated with an extensive cavity just beneath the integument, from which a smaller sinus extended upward. The fistula was believed to be incomplete, as, on careful and repeated examinations, no communication with the rectum could be discovered. The patient gave none of the rational signs, and auscultation failed to detect any physical evidences of tubercular deposit in the lungs. On the 3d of April Dr. S. Smith operated, laying the sinus open into the rectum. The wound was dressed with pledgets of lint, but as there was such an extensive surface to be filled by granulation, and as the patient has a poor constitution, the process of reparation has been very tedious. Stimulating applications, such as creosote lotion and iodine, have been applied to the granulations with good effect. He still (July, 1858,) remains in the hospital, though the wound is now nearly closed.

CASE V.—J. G., a native of Scotland, a stone-cutter, of good constitution and temperate habits, with no hereditary tendencies to disease traceable, was admitted to the hospital April 1st, for fistula in ano.

In December an abscess formed on the right side of the anus, which was opened; a fistula was the result, which was cut on the 5th of March by a Dispensary physician. On admission the wound was not healed, and a fistula was found communicating with it, which was cut on the 7th of April. The healing process was very slow in this case; the discharge from the wound subsequently burrowed beneath the integument of the perineum, and the sac thus formed was laid open by a bistoury on the 3d of July. The wound is now doing well, and bids fair to heal without further interference.

Remarks.—The management of a case of fistula in ano at this hospital is usually as follows: Should the patient be suffering from advanced phthisis, no operation is ever resorted to; but if the disease is incipient, the rule with Dr. Wood is to operate, and then by a seton or issue establish for a time a drain elsewhere. If the patient be feeble or cachectic, the operation is deferred until by constitutional treatment the strength and reparative power of the patient is restored.

The evening previous to the day for the operation, a large dose of castor oil is administered, and its operation is followed by a copious enema of tepid water. The contents of the bowel having been thus thoroughly evacuated, the operation is performed by introducing a large wooden director into the rectum, and a silver one into and through the fistula until it meets the first. Then a curved, sharp-pointed bistoury is passed through the fistula in the track of the silver director until it reaches the wooden one, when the silver one is withdrawn. The bistoury is then held firmly, and made to cut either through the intervening tissue while the wooden director is fixed, or else both director and bistoury are withdrawn together, and thus the fistula is laid open. After the operation the wound is filled with pledgets of dry lint until the flooding is arrested, after which it is dressed daily by lint laid in lightly, so as to cause it to granulate from the bottom of the incision outward. Opium is given sufficiently to keep the bowels in a quiescent condition for several days subsequent to the operation.

Case of Ulceration of the Rectum followed by Pelvic Abscess and extensive Peritonitis—death.

J. H., æt. 40, a native of Ireland, a laborer, of good health but of slightly intemperate habits, was admitted to the hospital March 26th, 1858. He complained of tenderness about the rectum, and said that his disease was piles. On examination, no hæmorrhoids could be seen, but on introducing the anal speculum, extensive but superficial ulceration of the mucous coat of the anterior wall of the rectum was found. He never had any illness since he was a child, or none within the last twenty years. Previous to that time he had on two occasions suffered from a fever, which was of a mild form and of short duration. He never contracted syphilis nor suffered from dysentery, and never passed any blood per rectum that he was aware of, and never used an enema.

For many years past his bowels had been alternately constipated and relaxed. After going for two or three days without a stool, the bowels would become very loose and remain so for about a week; then again constipated, and so on alternately. He had been employed for the past seven years in washing bottles at a brewery. He often found it, he said, a cold business. About three weeks prior to his admission he for the first time felt tenderness at the fundament. He did not feel it again until eight days before coming to the hospital, when, while at

stool, he found that the rectum was tender, and, to him, apparently contracted in its calibre. This tenderness and supposed contraction continued until the date of his admission. The morning before coming to the hospital he found that he could not void his urine, but before evening the difficulty had passed.

The ulcerated surface of the rectum was touched lightly with lunar caustic, and $\frac{1}{4}$ of a pint of water containing in solution 10 grains of nitrate of silver was ordered to be injected into the rectum twice a day. This was continued without inconvenience until the morning of the 30th, when, immediately after its use, he was attacked with a severe pain, deep beneath the pubic arch. Thinking that the pain might be due to the action of the nitrat. argent, some salt water was thrown up the rectum with a syringe, but it failed to alleviate the pain; it, however, gradually subsided, and then the injection was ordered to be used but once a day. The second time it was used a similar pain came on, and the injections were then discontinued. This was on the 1st of April. The patient wore an anxious expression, and was peculiar in his manner from the date of his admission.

Attention was now called to the abdomen, which he said was painful to the touch. His abdomen was naturally small and tense. Turpentine stupes were ordered, which relieved the pain, but a redness of the integument remained, which at first was supposed to be due to the turpentine. The scrotum became œdematous, and punctures were made to give exit to the serum. The redness of the abdomen increased, and it was soon noticed to be an erysipelatous inflammation; the tissues crepitated under pressure. Dr. Stephen Smith, visiting surgeon, now saw the case, and noticing the circumscribed tumor over the pubis, the œdema, redness and tenderness extending from below upward, the low condition of the patient, and his inability to micturate at times, thought it more than probable that ulceration and perforation of the bladder had occurred, and that this erysipelatous inflammation was the result of infiltration of urine. Incisions were made through the integument of the abdomen, but with little effect in relieving the œdema. A lotion of acetate of lead and opium was applied. The urine was mostly voided without the use of a catheter, though it was necessary to relieve him occasionally by its use. The urine contained no albumen, but a slight amount of what appeared to be pus with blood, was on one occasion noticed to pass from the urethra. When he was micturating, a few drops of fluid escaped per rectum, the quantity of which continued to increase until his death; it was supposed to be urine, though none of it was examined carefully.

His condition was gradually growing worse and worse. His countenance became more and more anxious and cadaveric in appearance. The scrotum began to slough; he complained but little of pain. At the time that it was presumed that perforation of the bladder had occurred, a catheter was placed in the bladder and allowed to remain 36 hours, when it was found that he could void his urine without its use. He continued to sink, and became unconscious on the 11th; from that date he lay in articulo mortis until early on the morning of the 13th, when he died.

Post-mortem examination 14 hours after death.—On opening the abdomen the whole of the abdominal muscles were found to be infiltrated with and dissected up and apart by a very dirty and intensely ill-odored pus. The amount of pus in the abdominal muscles and pelvis was at least 20 ounces. No pus was found in the peritoneal cavity, but there was evidence of extensive peritonitis. The peritoneum for the whole extent of the lower half of the abdomen was firmly adherent to the intestines by recently organized lymph. The pelvic viscera were removed *en masse*. An ulcer was found at the lower part of the rectum; perforating it near the verge of the anus, still higher, was a second large ulceration, extending through the anterior wall of the rectum, and communicating with a large abscess which lay between the rectum and the posterior and left side of the bladder, and extended up to the bottom of the peritoneal cul de sac that lies between the rectum and bladder. The abscess was found nearly empty; its contents had probably been evacuated with the stools of the patient during life. The bladder was found to be whole, and its perfect condition was demonstrated by filling it with water per urethra by a large anal syringe. The pus found about the abdominal muscles was probably the result of severe inflammation and consequent disintegration of these muscles, this inflammation having probably been excited by the extensive ulceration and abscess below as well as the attack of erysipelas in front. The specimen is now in the Museum of Bellevue Hospital.

REVIEWS AND BIBLIOGRAPHY.

Transactions of the Medical Society of the State of New York, for 1858.
Albany: 1858.

The present volume is in many respects superior to its predecessors. In size, it is an increase upon last year's, giving nearly 600 pages of

reading matter exclusive of the abstract of the proceedings. The ordinary paper covers are replaced by cloth ones, so that the bound volume is ready to be placed permanently in our libraries. This is a great improvement, which cannot fail to be appreciated by all who care to preserve the Transactions of such Societies.

With the exception of the lithographs of the deceased members, whose portraits, badly executed, do anything but adorn the volume, the illustrations are excellent.

There are several papers included in these transactions, which render the volume extremely valuable, and deserve a more extended notice than we can give them.

The annual address of the President, Dr. Augustus Willard, is the first in order. The theme is "air, exercise, and sunlight." This is timely, for at the present moment, the hygienic treatment of disease is attracting more attention than ever before, and as a prophylactic, the popular mind, moved by the influence of the profession, is learning to regard exercise and pure air as indispensable. Our youths are being trained in gymnasiums, and physical education comprises a good share of the instruction in many of our schools; while our colleges, even, catching the spirit of the day, are adopting the manly sports as a part of the students' duties, and are encouraging the boat club and such like amusements as conducive to good order, rather than regarding them as avenues to turbulence and disorder.

This is as it should be, and yet exercise alone is not sufficient; for, as Dr. Willard remarks, "to have its proper influence upon the health and strength of the body, it should be taken in the open air and in the sunlight."

The latter we believe to be far more important than has been heretofore supposed, and we are glad to see it so ably presented as it is in this paper. The analogy between plants and animals, in reference to the action of sunlight upon them, cannot be doubted; for the striking effects of long-continued absence of sunlight, as exhibited upon Dr. Kane and his companions of the Arctic expedition, fully sustains it. The influence of light upon animals has recently been investigated by M. Beclard, a synopsis of whose experiments will be found in the last number of the MONTHLY.

Light has its vivifying influence, which cannot be supplied artificially. The same amount of exercise taken in the open air and in the broad sunlight would be sufficient to meet the demands of health, which taken within doors would be inadequate. This is very forcibly put by Dr. Willard, who says: "The exercise may even be

active, but the chemical influence of artificial light, if any it has, can never by any process be made to supply the place of the sun's chemical rays, and the chemical constitution of the body cannot, of course, under such circumstances, be perfect." As regards the relative value of sunlight, Dr. Willard adds: "We would not give any undue consequence to sunlight; we simply consider it as one of the great and important necessities of the human system; pure air and active exercise being, as we have already said, the other two. Direct sunlight is at least equal in importance to pure air and exercise as an agent in the preservation of health, and for the prevention and cure of disease. In calculating the chances of life and health, there is the same propriety for taking it into consideration as the other two conditions, and the fact of free exposure to the sun, or confinement to shade, is equal in importance to the consideration of the amount, kind, and degree of labor or exercise to be used, or the quality of air to be respired." "The triad is inseparable."

The second, third, and fourth papers are biographical sketches of deceased members of the Society.

The fifth paper is on Anæsthesia, by Dr. Peter Van Buren, of New York. This is a brief resumé of the history of etherization, of chloroform, of amylene, and the different anæsthetics. With the majority of practitioners, preference is given by the author to chloroform; and while considering the subject of anæsthesia in its different relations, it is chloroform that is generally mentioned.

The ill effects of chloroform are attributed in a great measure to its impurity, and a direct influence in decreasing the mortality attendant upon surgical operations is awarded to it. Its use is lauded in obstetric practice, and in various spasmodic and nervous affections.

"To insure success in securing anæsthesia, the following directions as to the condition of the patient, and the mode of administering the vapor, have been found serviceable.

"1st. The patient, as far as possible, should be kept in a state of perfect quietude, and freedom from mental excitement, and if possible in a recumbent position. All talking and all questioning should be avoided.

"2nd. To ensure speedy success, the vapor should be allowed to pass into the lungs both by the mouth and the nostrils.

"3rd. No surgical operation of any magnitude 'should be commenced until complete insensibility has taken place.' (Simpson)."

Several tests to ascertain the purity of chloroform are given, and reference made to the valuable paper upon the subject, by Dr. Squibb,

read before the N. Y. Academy of Medicine, which appeared in a previous number of the MONTHLY, (Vol. VIII, No. 1.)

Among the means recommended to be used when anæsthesia has been carried too far, the author cites artificial respiration; the opening of the external jugular vein, in connection with artificial respiration, as recommended by Dr. Snow, and electricity, as proposed by Dr. Abeille, of Corsica.

In this connection we may add, that almost all recent writers upon the subject of anæsthæsia speak more of the pulse and less of the respiration, when describing the process of administering chloroform and other anæsthetic agents, or enumerating the measures to be used to avoid the extreme effects of this powerful agent.

In the new American Cyclopædia, under article Anæsthesia, great caution is given as regards the condition of the pulse, while the state of the respiration is not mentioned; whereas all practical operators agree in recommending that the respiration should be especially watched in connection with the pulse. The respiration will often cease some time before the pulse gives any indication of the poisonous action of the agent, in which event resuscitation is more difficult. If respiration has ceased, it is dangerous to delay the means of resuscitation, although the pulse may still be regarded as good.

The next paper, "on the use of Amylene as an anæsthetic," is by Dr. John G. Orton, and is laudatory of the new anæsthetic, the use of which, however, is now mostly discontinued—the mortal effects attending it in the hands of its discoverer, Dr. Snow, together with its volatility and its uncertain action, depriving the profession of that confidence which is necessary for the popularization of such an important agent. A History of the Discovery of Amylene, and experiments performed with it, will be found in No. 2, Vol. VIII, of the MONTHLY.

There are two papers on cerebro-spinal meningitis, one presented by Dr. D. G. Thomas, by authority of the Oneida County Medical Society, and the other by Dr. J. V. Kendall, of Clay, Onondaga County. Both of them are valuable contributions to the literature of this fearful disease, before which medical treatment is so often powerless. The latter paper seems to us especially to be commended for its straightforward narration of what the author has seen, for the clear, though condensed reports of cases, and for the judicious remarks upon the treatment to which patients should be submitted when affected with this disease. A careful perusal of it will be profitable to any one who has opportunity for it.

The report of the committee on the comparative use of ergot and

the forceps in labor, will be found in full in the last number of the **MONTHLY**, and we therefore do not dwell upon it, farther than to say that its doctrines ought to receive the careful consideration of all who are engaged in the practice of midwifery.

The ninth paper is a report of a "case of ovariectomy," by H. S. West, M.D., of Binghamton. The opinion is expressed in it, that "the patient owes her life to the opium treatment, thoroughly followed up and watched." The preparation used was the sulphate of morphine.

We must pass by the tenth paper on "puerperal fever," by N. Potter, M.D., Hallsville, N. Y., because our pages have been largely occupied with this subject and must still continue to be. The paper is, however, none the less interesting.

The next report, though short, is in some respects unique, as it is of a case of fracture of the cervical vertebræ, in which the patient lived twenty days after the accident. The patient fell through a hatchway, striking on the back of his neck. Consciousness remained after the fall; there was pain and stiffness in the neck, loss of power to move the fingers, with some difficulty in moving the arms, loss of sensation and motion of the legs, and of control of the bladder. The case was regarded as one of concussion of the spinal cord, and under the treatment improvement was quite marked up to the twentieth day after the accident. There was no pain in or stiffness of the neck; the ability to move the arms and wrists had returned; the sensibility of the legs was restored, and the bowels and bladder resumed their natural functions. His attendants undertook to move him on the twentieth day, when he complained that they had "wrenched his neck, and that he felt blind." In two hours he died. On examination, there was found to be fracture of the fifth and sixth cervical vertebræ, the former being broken through its laminae on both sides, the fragment being driven back so as to encroach upon the cord, and the sixth being fractured in the same way, but without displacement of the fragment. There was also a portion broken off from the body of the fifth vertebra. No effort at union of the fractures was observable.

The statistics of obstetric practice, by Dr. A. Van Dyck, are of value, but we must pass them, as is also true of the next paper, entitled "congestive fever," by T. H. Squire. The titles of—pernicious fever, typhus petechialis, spotted fever, cerebro-spinal meningitis, brain fever, are put down as synonyms of the first, but this passes our logic. The paper is, however, of value as a record of cases, which are well reported, though they allow reason to doubt if two or three different diseases are not confounded in them as well as in the title of the paper.

The two papers next following are by Prof. Alden March, of Albany, the first being "upon osseous union of intra-capsular fracture of the neck of the femur." It is very well illustrated, the drawings being neat and accurate. The possibility of union after fracture of the femur within the capsule is still a mooted point, and these specimens are brought forward by Dr. March to aid in settling the question. Dr. March is quite confident that his specimens support him in advocating the doctrine of complete fracture within the capsular ligament, and union by ossific deposit, without impaction. These consist of a specimen procured in London, to which no history is attached, and of one obtained from an old negro who died in the poor-house of Albany, and had been for years peculiarly lame. In early life, he is reported by those who knew him, to have fallen from a shed, and afterwards to have been treated by a skillful surgeon for fracture of the thigh. A cast of another specimen is also alluded to by Dr. March. Now it is very clear that the first thing to be done is, to determine the extent to which the capsule of the joint is attached to the neck of the femur upon its superior surface; and Dr. March, in differing from Wilson as to its extending to the middle of the neck of the femur, undoubtedly makes the possibility of the occurrence of this fracture much greater. The result of our own observation is, that the line of attachment of the capsular ligament is not an absolutely fixed one, but varies in different subjects; and that a fracture occurring in two cases at the same absolute distance from the extremity of the femur, might be in one entirely within the capsule, while in the other it would be so only partially. This has always seemed to us to be one of the grounds of the difference of opinion upon this subject among surgeons, and on this account it is absolutely necessary to procure both femurs of the subject, for the sound one will show the line of attachment without the confusion necessarily produced by the fracture and the reparative processes which follow it.

The next, a case of calculus, required an operation for its removal. The patient was a woman, aged eighty-seven years, and the operation was performed by engaging the stone in the urethra, and then, as it could not pass, a straight probe-pointed bistoury was introduced by the operator flatwise, on the upper and outer face of the calculus, for about an inch and a half; the edge turned up, and he then cut upwards and outwards towards the groin. "The anterior extremity of the urethra was divided from a third to half an inch, which was amply sufficient to enable me to bring the calculus forward, and to extract it by the aid of the finger and grooved staff." As the result of the operation "it

has neither left a fistulous opening in the neck of the bladder, as one mode of operating on the female is liable to, nor incontinence of urine, as has often been the result of dilating the urethra, or of opening it in a downward direction."

The illustration of the case is very elegant, and it is by the same artist as that of the preceding paper, John E. Gavit, of Albany.

A letter from Dr. Cleveland, Health Officer of the City of Brooklyn, to Dr. C. S. J. Goodrich, relative to the mortality of that city, forms the subject of the next article, and is followed by a short paper "on the Registration of Births, Marriages and Deaths," by Franklin B. Hough, M.D. It is very important that some method of registration should be used, both for legal and statistical purposes, and the official position which Dr. Hough has occupied in preparing the Census of the State, has made him acquainted with the difficulties of the subject. This paper, therefore, is valuable in containing the suggestions of a competent person upon the method to be pursued in carrying out a proper and uniform registration.

Dr. C. V. Barnett has contributed a valuable paper on "Poisoning by Arsenic, from Absorption." It is a report of twenty-one cases observed by himself, wherein the peculiar poisonous effects of arsenic were the result of external application and absorption of this drug; all but four were relieved by the continued exhibition of the hydrated peroxide of iron. In nearly all the cases the "symptoms were dryness of the mouth and throat, great distress at the stomach, with more or less vomiting, uniform pain and distress in both upper and lower extremities, in most of them paralysis to a greater or less extent, always commencing with pricking and numbness in the ends of the fingers and toes, generally tender and irritable condition of the bowels, in most instances accompanied with diarrhoea and inflammation of their mucous coat; a universally small and quick pulse, and a general inability to retain food of any kind on the stomach." In no instance was ptyalism observed, nor any cutaneous eruption, nor any affection of the hair or nails.

The next paper is a very interesting report of a singular "case of accidental Nigrities, occurring in a female at the age of sixteen," by W. H. Gardiner, M.D. The patient had presented a fair complexion up to the age of fourteen, about which time she commenced to menstruate, and nearly simultaneously dark brown spots were first observed, but attracted no particular attention till two years afterward. At sixteen years of age she was taken sick, and at that time she began to grow darker in complexion, till she became in the space of two months

distinctly black. Her hair was black, coarse, and straight. She presented no other evidences of disease. When seen by Dr. Gardiner, she was in her twentieth year, and a few months after was suddenly taken sick and died. No post-mortem was made.

The annual address delivered before the Albany County Medical Society, on "Human Longevity," by its President, Dr. Samuel H. Freeman, is communicated by the Society, and is still another speaking evidence, fortified by statistics, of the value of a rigid observance of the sanitary laws of Nature for the enjoyment of health and the prolongation of our days.

It was a very good resolution adopted by the Society at the preceding session, that hereafter the Vice President of the Society should deliver an address at some period during the session. Dr. Thomas C. Brinsmade, of Troy, this year held that office, and performed this duty in a very able and interesting manner. For twenty-one years Dr. B. has been in the constant habit of making a record of *all* his cases, whether mild or grave, and of noting their results. This has been done daily, not allowing any accumulation to occur, for this seriously threatens the success of any such undertaking. With an earnest determination to be regular in noting cases every day, he declares it to be quite easy to keep such a record—without it, it is impossible. The register used by Dr. Brinsmade is ruled for the following headings, and in the order in which they are given, viz.: date, name, age, sex, occupation, color, nativity, habits, (intemperate or not,) disease, cured, duration, remarks.

This allows a rapid jotting down of facts chiefly desired in ordinary cases, for *all* are to be registered, and at the same time the interesting features of important cases can be put on record separately.

About 270 pages of the volume are occupied by these tables, which are a mine to be quarried by those who are investigating disease statistically. They deserve to be imitated by every man in practice, whether he has five or fifty patients every day. The fact demonstrated by them—to wit, that such a record is practicable, is useful, and leads to valuable results—is the great and impressive lesson from them, and may we all do likewise.

Among the remarks made upon various diseases, we find it stated that of the twelve cases of intermittent fever in 1857, eight were treated by nux vomica given in pills, each of which contained two grains of powdered nux vomica and one grain of extract of gentian. One pill every third or sixth hour, according to the length of the intermission, is usually sufficient to interrupt the paroxysms, after which one may be

taken three or four times a day for two or three weeks, to prevent a relapse.

There still remain two papers of value, one from the King's County Society "on the Statutes of the State of New York regulating the practice of physic and surgery—the rights, duties and immunities of physicians—and their relation to the Medical Societies of the counties in which they reside;" and the other the report by Dr. Bontecou, of Troy, of a case of "enormous diffused aneurism of the axilla from subcutaneous rupture of the artery." The sub-clavian artery was tied, but there were subsequent hæmorrhages twenty different times, though finally the patient recovered. The case is interesting, and we shall endeavor to find room to reproduce it in the MONTHLY.

Plates are also given of Dr. Sim's Uterine Elevator, and Dr. Armsby's instrument for passing a seton through the hernial sac and inguinal canal, with the design of producing a radical cure of the hernia.

We have thus sketched as briefly as possible the contents of this volume, omitting to mention many good things which our readers will find in it. With all the value of the papers contained in this volume, with all its good plates, with all the effort made by the society to put itself creditably before the profession at large, and with all the expense incurred by the State in issuing it, the volume goes out in an important respect a shame and disgrace to all connected with it. We refer to its *saturation* with typographical errors. No other word is sufficient. It is not only full of them, it is saturated with them; and this is not much relieved by the page of errata which is added at the end of the volume. We understand that the State presses will not wait for proofs to be sent to authors, as should be done, and therefore especial pains ought to be taken with the proof readings. For the sake of the society and the whole profession, we beg some medical gentleman at Albany to take the trouble to read the proofs of subsequent volumes, even if he has to volunteer his services, and does not receive any pecuniary recompense. * *

The New American Cyclopædia; a Popular Dictionary of General Knowledge. Edited by GEORGE RIPLEY and CHARLES A. DANA. Volume II, Araktsheeff—Beale. New York: D. Appleton & Co. 1858. Pp. 776.

We have expressed our satisfaction at the appearance of the first volume of this publication, in a previous number of the MONTHLY, and

it is a cause of gratification that the second is entitled fully to everything then said. Indeed it is a cause for honest pride to an American that the undertaking promises so happy a combination of useful and reliable knowledge, and a style both popular and attractive. Encyclopædias are generally avoided by the young and unprofessional, on account of the intolerably prosy style which is employed by *Dryasdust* in the preparation of their contents. It is something of importance when such a style is replaced by one light, interesting and attractive.

The articles generally show accuracy, and bear with them the air of reliability. It is not possible to control so large a body of collaborators, so as to ensure *absolute* reliability, but it strikes us that this has been done better here than with some contemporary publications of a similar character. The *London Athenæum*, in a late review of the first volume, is pleased to select the errors and misstatements in that volume as characteristic marks of the publication. We have no desire to play the part of scavenger, in detecting what necessarily must be present in any publication of this kind, but feel really thankful that the people have opened up to them so little of error and so much of accurate information. Occasionally we notice a desire to attach the name of an American to some process which has been merely *employed* by him, instead of invented, giving a sort of importance in this way not deserved; but this, we suppose, springs from the friendship of the author of the article, rather than from a desire to do injustice.

We shall look forward to the appearance of the other volumes of this series with much interest, and hope that they may present the same attractions as the two already issued.

L. H. S.

Elements of Inorganic Chemistry, including the Applications of the Science in the Arts. By THOMAS GRAHAM, F.R.S., L. & E., late Prof. of Chemistry in University College, London. Edited by HENRY WATTS, B.A., F.C.S., and R. BRIDGES, M.D. Second American, from second revised and enlarged London edition. Blanchard & Lea: 1858. Pp. 852.

The appearance of the first American edition of Graham's Chemistry created an epoch in the history of text-books on this beautiful science. The style was interesting, devoid of verbiage, the scientific details were reliable and trustworthy, and the illustrations novel and well-suited. The edition was soon exhausted, when the American publishers commenced the re-publication of a second edition. But, 430 pages being published in 1852, nothing had been done towards

the completion of this edition during the last six years. Many other treatises on the science have been, from a sort of necessity, employed by teachers in their classes, when Graham's was their decided preference. It is a pleasant thing to find that, at length, the favorite text-book, clad in new attire, is put within the reach of the student. The value of the latter half—422 pages—has been much enhanced by the careful labor of Mr. Watts, the English editor. He was induced to take hold of the book, as the duties of the author, in his present position as Master of the English Mint, prevented him from undertaking the task. Mr. Watts has added a supplement, bringing the subjects treated of in the volume up to the present condition of the science. This contains the subjects of "the Mechanical Equivalent of Heat; the Relations between the Chemical and Magnetic Effects of the Electric Current, and the Reduction of its Force to absolute Mechanical Measure; also the Measurement of the Chemical Action of Light." Gerhardt's Unitary System is employed for the exhibition of the constitution and classification of chemical compounds. "The last portion of the supplement contains the most recently discovered facts relating to the non-metallic elements, and the metals of the alkalies and earths; a prominent place being assigned to the *allotropic* modifications of certain elements, viz., boron, silicon, sulphur, selenium, phosphorus, and to the methods of obtaining the alkali and earth metals in the free state."

We have not time nor space to go into any full examination of the manner in which these subjects are treated, considering that we are doing all our readers can desire, when we announce the *appearance* of the completed volume of the second edition, with such valuable additions. It is as though we had announced the arrival from a foreign country of an old friend, *much* improved by travel, and the additions made to his wardrobe in distant lands. Under such circumstances commendation is not wanted; the mere announcement of the arrival speaks volumes.

L. H. S.

A Manual of Psychological Medicine, containing the History, Nosology, Description, Statistics, Diagnosis, Pathology, and Treatment of Insanity, with an Appendix of Cases. By JOHN CHARLES BUCKNILL, M.D., Lond., &c., and by DANIEL H. TUKE, M.D., &c. 8vo, pp. 536. Philadelphia: Blanchard and Lea.

It is not often that a work makes its appearance which is so completely adapted to fill a void in professional literature as the one before

us. Here we have carefully and conscientiously brought together all the particulars of insanity which it is necessary as well as desirable that the general practitioner should be acquainted with, and which, for their attainment, have heretofore required the diligent study of a large number of books not usually found in miscellaneous professional libraries. The book has long been needed; but we do not propose to make a review of it, neither shall we cull any particularly striking passages. Our advice to every one is, to get a copy. It should be included in the list of books which the youngest practitioner provides himself with when he puts out his name to the public gaze; and there is no practitioner so old in the harness that he will not find himself benefited by a careful study of it.

Of Nature and Art in the Cure of Disease. By SIR JOHN FORBES, M.D., D.C.L., (Oxon,) F.R.S., &c. From the second London Edition. New York: S. S. & W. Wood. 1858.

The author of this volume is well known as the former editor of the "Foreign British and Medical Review," at one time dividing the patronage of the profession of Great Britain with the Medico-Chirurgical Review, with which it has since been incorporated.

The ability of the author as editor and writer, his high social position, and his long career as a physician, add great weight to the opinions contained in this volume.

Its tenor is well expressed in the following passage, taken from the introduction: "It is thought that the general views here given will enable such junior practitioners as may study them, to apply them, of their own accord, to the improvement of their treatment of diseases; by strengthening their confidence in Nature's powers, and by mitigating, in their hands, the evils of polypharmacy and of that meddlesome and perturbative practice still so predominant in this country."

The scope of this work, which is by no means complete, but highly suggestive, cannot be indicated better than by quoting the titles of the various chapters.

The 1st and 2nd are Introductory to the General Subject; the 3rd is entitled General Notions of Diseases; 4th, Of the Causes, Mode of Production, and Nature of Diseases; 5th, Of the Course or Progress of Disease; 6th, Of the Natural Terminations of Diseases, and the Modes in which they take place; 7th, Evidence in favor of the Curability of Diseases by Nature; 8th, Of the Existence and General Na-

ture of the Medical Art; 9th, Instruments of the Medical Art; 10th, of the Mode of Action of the Instruments of the Medical Art—Direct and Specific Action; 11th, Of the Mode of Action of the Instruments of the Medical Art—Indirect or Vicarious Action; 12th, General Estimate of the Powers of the Medical Art.

The author believes in medication to a certain extent, but is skeptical as to its beneficial results in acute diseases. He trusts greatly to the beneficent action of Nature, and recommends that what he calls the natural history of disease should be more closely studied. Then it will be learned that many diseases, if left alone, will result in cure; whereas, when perturbed by active, indiscriminate treatment, they lose their distinctive characteristics, and frequently end seriously. In chronic diseases, on the contrary, he trusts greatly to the action of medicines.

This book will find no favor with those who are blind followers of active therapeutics in disease, and who regard any departure from the traditions of the schools, and a too strong confidence in the powers of Nature, as a leaning to the dogmas of homœopathy; but to those who from experience have become "aware of the great imperfections of their art, and of its inadequacy to fulfill, in a satisfactory manner, much that it professes and undertakes to accomplish," the suggestions and philosophy found in its pages will increase their confidence in the unlimited resources of our art, and make them still greater students, more earnest searchers for the truths yet to be developed. We like the book—we believe its doctrines to a great extent, and therefore we cordially recommend it. D.

PROCEEDINGS OF SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

[Reported for the MONTHLY by E. LEE JONES, M.D., Secretary.]

Regular Meeting, Jan. 27, 1858. DR. E. R. PEASLEE, *President*.

Dr. G. T. Elliot exhibited a lung removed from a child 3 months old. When first seen, 10 days before its death, the child presented the evidences of syphilitic cachexia. He had no history of the case, the child seeming to sink and die from mere exhaustion. On examining the body after death, taking into consideration the cachexia, anx

ious expression of the face which he had noticed a few days before its death, &c., he expected to have found that change in the liver described by M. Gubler.

Autopsy.—He found the liver somewhat enlarged and congested. There was no jaundice. The gall bladder did not contain much fluid, and what it did contain was quite light in color. On careful examination into its appearance, there was none of that hardness, none of that thin discharge that could be squeezed out from the organ—in fact, none of the appearances said by him to exist in cases of this sort. Dr. Dalton was kind enough to examine a section under the microscope, and he found the cells to be normal; there was no preponderance of the fibrous or plastic element.

Dr. G. T. Elliot also presented a specimen, showing the results of *endo-metritis*, perforation of the posterior wall of the uterus. It is a specimen of interest, involving, as it has done, a good deal of responsibility, and resulting unfortunately. This was taken from a young woman, *ætat* 18, who had arrived at full term. She fell in labor on the 16th of the month, in Bellevue Hospital, at about 7 P.M. Everything seemed to go on favorably during the day. Dr. Hardaway, House Physician, detected a cranial presentation; he recognized the anterior fontanelle towards the right side of the pelvis, and also that the sagittal suture was parallel to the transverse diameter of the brim; the posterior fontanelle he did not make out. The intensity of the heart sounds was to the left side. He also recognized during the day that there was some diminution in the capacity of the brim of the pelvis. 9 P.M. the membranes broke. During the night she obtained some rest by chloroform, but after the effects passed off the pains returned, and she suffered somewhat from them; she had also vomited. About 9½ the following morning he was summoned to see her. The first thing that struck him when he arrived was the change in expression; instead of an expression of perfect health, and one entirely free from anxiety, it was wholly changed into an intensely anxious look. She vomited considerably. Pulse 120. Abdomen somewhat tender to the touch. Examination enabled him to recognize the diminution in the antero-posterior diameter of the brim; heat of vagina normal, discharges were perfectly normal and satisfactory. Head was now engaged in the brim, but was movable. The pains were not forcible, but powerful enough for the head in that position. Under these circumstances he deemed it advisable that she be delivered without loss of time. In the consultation that followed there was a difference of opinion, first as to the degree of deformity of the pelvis; next

that the failure in the expulsive efforts was the cause of delay; the consultants urged the administration of ergot—it was then towards 11 o'clock; under the circumstances he acquiesced, and some 12 grs. were given. She was again seen in 3 hours' time; it was found that the ergot produced some effect, but not in such a degree as in other cases when the same quantity was taken. On examination the only change found was in rendering the head less movable. There was no obstacle urged against immediate delivery; the foetal heart was still beating, the vagina was a little hotter, the character of the discharge as good as before, her expression was worse; vomiting, though not now diminished, did not exist in any degree to cause alarm. He delivered with the forceps without any difficulty or delay. The child was a male, and weighed 6 pounds. The uterus contracted well, and there was no trouble with the placenta. This was about 3 P.M. Sunday. After the operation she was placed in a private ward, and Dr. Hardaway gave directions for the administration of morphine in sufficient quantities to insure sleep. It happened that, instead of getting to sleep, the vomiting increased; the nurse by some mistake did not give the requisite quantity, and she died in 36 hours afterwards. After the operation the pulse became rapid, secretions excessive, attended with a gulping up of food, which could not be checked by the administration of pellets of ice, neither by morphine in all its forms of administration by mouth, anus, endermically, &c.

Autopsy.—The thoracic viscera presented nothing worthy of note; liver soft and fatty. There was a large amount of fluid in the peritoneum. Though there were no evidences of general peritonitis, there were flakes of lymph in the neighborhood of the uterus. The uterus being examined, showed no signs of peritonitis. Upon the posterior wall of the uterus, exactly in the mesial line, near the os, was a perforation about the size of a vest button hole. Its appearance shows it to be no laceration. This perforation is just in that situation corresponding to the promontory of the sacrum. The pelvis is under size; there is a diminution of the antero-posterior diameter of the brim, about an inch; the projection of the sacrum is accordingly quite sharp, and the head of the child pressed this posterior wall of the uterus against this sharp edge of bone. On laying open the uterus on the mesial line, we could readily see the exact spot where this perforation had been made from within; it was opened somewhat obliquely along the walls of the uterus. The uterine sinuses presented, in their interior, portions of coagulated blood, which is looked upon as an evidence of inflammation. The appearance of this perforation from within was such as might be

expected from the appearances without; below it, and extending to the same line, there was also some solution of continuity, not extending completely through the wall; it is in direct line with the perforation and the point where the head would rest. The portion that rested upon the symphysis pubis had a similar lesion, but not to the same extent. On careful examination by Dr. Clark, of these parts, he came to the conclusion that these ulcerations were not the result of laceration, but sloughing. Careful observation by the eye convinced him of that point. The appearances upon the fetal head correspond to those noticed elsewhere.

Microscopical Examination.—On microscopical examination by Dr. Clark, there were displayed evidences of endo-metritis, pus not perfectly well formed, presenting itself in quantity in the discharges from the internal walls of the uterus. Carefully opening the sinuses with clean instruments, there were no evidences to the naked eye of pus being present, but the microscope discovered an abundance; pus was also found under the broad ligaments, and could be squeezed out of a section made across the fallopian tubes. Upon the child's head, after birth, could be seen the direction of the pressure exerted upon it. The left parietal, near the frontal bone, was deeply depressed at the point that rested on the promontory of the sacrum. To guard against any undue pressure from the blades, he placed a towel between them. The child died on the 19th. After death, the head was examined, and underneath this depression there was found blood effused between the dura-mater and bone; also an ounce or more under the lobe of the cerebrum.

Dr. Elliot remarked, that this case was one of a great deal of interest, and he thinks it illustrates very strongly the dangers of delay; that it enforces a rule that he has endeavored to prove—the advisability to terminate the labor as rapidly as possible. He submitted the question to the Society, whether the change in the countenance, the commencement of vomiting, &c., did not indicate the commencement of metritis? Whether the time will not come when it shall be looked upon by all obstetricians as entirely wrong to allow a woman to reach such a point before art be allowed to interfere?

Dr. Clark.—In relation to the green discharges in the uterus, he was reminded by Dr. Elliot that it was an evidence of death of the fœtus. The discharge in this instance was between the membranes and the wall of the uterus, and could be squeezed from thence by the fingers. He thought it to be owing to inflammation of the uterus before the child is delivered.

Dr. Elliot remarked that Dr. Clark had misunderstood him in that

respect. He only stated the fact as the opinion of some, and not as an acknowledged fact among obstetricians; that in this day of auscultation, it would not by any means be admitted in the category of facts.

Dr. Gardner referred to a case of labor which he was called to see a week or two since. The head presented in the first position, and could just be reached by the finger; and there it remained for some three days, the os being firm and undilatable. He delivered the child at the end of that time with a long forceps through an os, the diameter of which was not over $2\frac{1}{4}$ inches. The child lived five hours. The mother subsequently did perfectly well. On the forehead of the child the frontal bone was depressed to the distance of one-eighth of an inch, which corresponded with the projection of the sacrum.

Dr. Barker presented a *Polypus of the Uterus*, which he had removed that day by excision from a patient, æt. 38, and mother of 3 children; the youngest is 6 years old. Since 3 years ago she has suffered from hæmorrhage at her menstrual period; within the last few months it has been at times considerable, and, as a consequence, she has been within the few weeks past very much blanched and anæmic. Within the last few weeks there was also a good deal of purulent discharge from the vagina, of a very offensive odor. On examination the os was patulous, through which a small portion of the tumor protruded; the main portion of the tumor was in the uterus. He introduced a sound, passed around it, and found it to be pedunculated; the pedicle was about $1\frac{1}{4}$ inches in diameter. Here is a point of ulceration and decomposition of the tissues, which accounts for the offensive discharge. The amount of blood lost in the operation did not exceed 3i.

Dr. Dalton presented a specimen of a product of *Conception*, removed from a woman who considered herself 9 months pregnant. It is a very good specimen of moles. It is an ovoid-shaped body, more or less red, and of a gelatinous consistency. He presumed that they were in all cases the products of conception. The mass is lined with a smooth membrane, the chorion, and is made up almost wholly of blood that has been effused. It is seen, as is frequently the case, that the upper and lower portions of the tumor differ from each other; the upper portion is thick, rounded, and ovoid in shape, while the lower portion is narrow, bloodless, and compressed. He presumed that this occurs in consequence of the ovum being pressed out, and the other portion retained in the cavity of the cervix for two or three hours, until abortion is complete. This fact also explains why the ovum sometimes is not found in abortion; but still, notwithstanding the ab-

sence of the ovum, so long as there is a decidua or chorion to be recognized, it is nevertheless a true product of conception.

Dr. Cock read the history of a case of inflammation of the *Mastoid Cells*, extending to the membranes of the brain.

Christian Lakowski, æt. 35, Prussian sailor, admitted Jan. 20, 1858.

Jan. 21st.—His account is, that he was taken with backache, pain in his limbs, fever, and a severe throbbing pain in his left ear, for which he can assign no cause.

Eight days ago the ear began to discharge, and for the last two days he has spit a small quantity of blood, without cough. His pain has continued unabated from the first, with attacks of delirium for several nights past. He has had an emetic, a blister behind his ear, and some purgative medicine before admission.

His skin is hot, face flushed, pulse 100; was 120 when admitted, full and strong. Respiration frequent, tongue heavily coated. He complains now of headache exclusively on the left side, and very severe, with soreness of the muscles of the left side of the neck. There is a purulent discharge from the ear of that side. He has double vision and muscæ volitantes; pupils natural, equal and responsible. He does not wink the left eye with the other, and cannot close it. The mouth is drawn to the right, and he cannot pucker the left side to whistle. Protrudes his tongue straight, and there is no loss of power on either side. He first noticed this condition of the face a week ago. Was ordered C.C. to the temples; calomel grs. x., and R spts. æt. nit. 3i., tr. aconite gtt. iii. every two hours last evening.

Jan. 22.—Yesterday afternoon his pulse came down to 76. Was ordered to take his aconite every three hours, and have leeches to the temples. This morning his pulse is 80, and softer. Slept but little during the night, but had no delirium. Face less flushed. Can close the eye better. Air escapes through the ear when he blows.

P. M.—Vomiting. Ordered blisters behind the ear; calomel, grs. xii., divided into three powders; to take one every three hours.

Jan. 23.—Tongue cleaner; bowels moved freely; pulse 86; full, rather hard, and slightly irregular. Has some subsultus; grits his teeth; says he sees better; no more vomiting.

P. M.—Muttering delirium and has to be secured in bed; continually smacking his lips; eyes fixed on vacancy; urine clear; sp. gr. 1.026; albuminous, viz., heat and nitric acid both throw down a white precipitate in moderate quantity, but a large excess of the acid dissolves its own deposit. Aconite stopped; ordered calomel, gr. every hour.

Jan. 24.—Right eye very much congested and the cornea hazy; semi-comatose; respiration 48 and somewhat labored; evacuations involuntary; pulse 150. His pulse gradually became more frequent and the respiration stertorous through the day. Died at 6 P. M. Autopsy 18 hours after death. The membranes of the brain were very much congested. The base of the cerebellum and pons varolii were covered with a thick deposit of lymph, which extended somewhat over the upper surface of the cerebellum, and was quite thick upon the spinal cord, as far down as the first dorsal vertebra, which was as far as traced.

The deposit was alike on both sides of the cerebellum; nor could any direct connection be traced between it and the ear, although pus escaped from the internal meatus, and pus was found in the mastoid cells. There was no perceptible disease of the kidneys.

Dr. Sayre presented a specimen of *Osteo Sarcoma* of the upper jaw, which first made its appearance some twelve weeks since. The patient, a gentleman 52 years old, of strong, robust constitution, and no hereditary predisposition, suffered from what he supposed was toothache for four days. The tooth was then extracted; a small portion of root was broken off and left behind.

The pain still continuing, he returned to the dentist, who, in his efforts to remove the remaining portion of the tooth, perforated the antrum. The pain continued to increase, and in three weeks after the extraction of the tooth a tumor made its appearance. The pain and tumor increasing, he was requested to see him ten days since; its malignant character was at once recognized. The tumor crowded upon the nostril of that side, so as to occlude it completely, elevated the eye, changing its axis in relation to the other, and at the same time protruding it considerably. On consultation with Drs. Mott and Buck, an operation was advised. The patient consented, and the left sup. maxillary bone was excised on last Saturday.

A portion of the tumor behind had to be taken away by fragments. To-day the dressings were removed, and union had taken place throughout the external excision, which extended from the inner canthus of the eye to just within the angle of the mouth. There was no hæmorrhage from the operation. Microscopical examination showed it to be cancerous in its character.

Dr. Bauer presented a specimen, removed by amputation from a lad æt. 16, who entered the L. I. Hospital on the 4th of this month, on account of ankylosis of the knee, following inflammation of the joint. The leg was at an angle of 30°, with considerable contraction

of the flexor muscles. This lad was rather anæmic and feeble looking, and though he had acquired a good height, was somewhat backward in manly development. He requested the removal of his deformity, and accordingly an operation was performed for straightening the limb by dividing the fibrous insertion of the fascia lata, together with the flexors, using very little force, which broke as he thought all the old adhesions. The limb was secured in a straight position, and the patient did perfectly well for three days, when febrile excitement was developed; the knee-joint did not inflame as is usual. On examining the wounds it was noticed that sloughing had commenced. The system was placed upon a supporting treatment. On the ninth day after the operation he sustained the loss of some 12 or 13 ounces of blood. The sloughing went on. On 17th day the line of demarkation had pretty well formed, and granulations began to spring up; the question of amputation came up, and upon consultation it was thought best. He amputated the thigh on Friday last. On examining the limb afterwards, it presented a most unique result; instead of breaking up the ankylosis, he had separated the epiphyses from the bone. Out of 125 operations upon children of 6 months old and upwards, where these epiphyses would be easily separated, he had not met with a like result. The epiphyses are seen attached to the bones of the leg, and separated from the thigh; and between the external condyle and the femur there is a space, caused probably by suppuration, into which the finger could be introduced; the surfaces of the bones are denuded of cartilage, the other condyle which is in connection with the tibia has a slight degree of mobility, even the crucial ligaments are in existence. The patient is doing tolerably, though his recovery is yet doubtful. He was surprised to find that such a small amount of force which he used would produce this result, when fifty times this force on younger patients was unattended with any such result.

Regular Meeting, February 10th, 1858.

Dr. Krakowitzzer exhibited for *Dr. A. L. Voss* a specimen of *Aortic Aneurism*. D——, a German, 39 years of age, a very stout and muscular man, of remarkably white complexion, a machinist engaged in turning metal, has been temperate and in good health up to his 28th year, when he was taken with inflammatory rheumatism; how long or how severely he was sick, and whether he then had cardiac trouble, cannot be made out now; but from that time to his death he was affected frequently with rheumatic pains in different parts of his body. Last summer exposing himself while in heavy perspiration to a cool draft of air, he first felt pain in his chest and cough, for which no regular

medical treatment was sought. Three weeks ago a sharp pain in his left arm from the shoulder downwards, combined with an alarming degree of dyspnoea, was brought on suddenly by muscular exertion while going to bed. Henceforth any sudden muscular exertion, an abrupt change in the posture of the body, would bring on the same attack. Such fits lasting from half an hour to three hours, were relieved only by the most absolute rest, and by sitting with the upper part of his body bent forward. A very copious expectoration of white frothy sputa during the attack afforded no relief whatever.

On the 11th of January the patient applied at the German Dispensary for relief, more on account of the pains in his arm than for his other affliction. The diagnosis in the journal of that Institution, by Dr. E. Schilling, was "Aneurism of the Aorta Ascendens, hypertrophy of the heart, and insufficiency of the aortic valves." On the evening of the 22nd of January he had again one of his attacks, but more violent than usual. Dr. Voss found the man sitting in the cold hall, under the most violent symptoms of dyspnoea, begging for air, his skin cold and clammy, the face cyanotic, veins of the neck very prominent, but not pulsating, his pulse small and frequent, alike on both wrists. The humid rhonchus in the trachea and bronchi so loud as not to permit the perception of any other respiratory sounds. All means to relieve the lungs of the venous congestion, or to restore the pulmonary circulation, failed; the man died with acute oedema of the lungs.

Autopsy.—About 15 hours after death, examination of the chest only permitted.

In each pleural cavity about two pints of clear serum. Both lungs adhering pretty extensively to the costal pleura by false ligaments, oedematous, congested with dark blood, in every other respect healthy.

The lower portion of the mediastinum adhering to the pericardium, the cavity of the pericardium entirely obliterated by close adhesion of its two layers. The heart measuring in its transverse diameter $7\frac{1}{2}$ inches, in its longitudinal diameter 8 inches, weighing with pericardium and a very small portion of trachea and oesophagus 27 ounces. All the cavities of the heart widened, mostly so the left ventricle. The muscular wall of the left ventricle $\frac{1}{2}$ inch thick, that of the right rather thinner than normal; a layer of fat from one-sixth to one-half inch thick covers the anterior surface of the heart, more so the right ventricle. The cavities of the heart filled with dark jelly-like blood, no fibrinous coagula.

The tricuspid and mitral valves sufficient, the free edges and up-

per surfaces of the mitral valve thickened by exudations in various stages of organization and retrograde metamorphosis. The aortic valves thickened partly by infiltration with a jelly-like clear substance, showing in some spots the change to atheromatous masses.

Immediately above the free margins of the aortic valves the aorta was dilated into a spheroid sac, showing, when opened, on its left side a slit giving easy access to two fingers, and forming the entrance to a pouch, holding by measurement a little more than two fluid ounces. The posterior edge of the chink projects like a spur, thereby forming a sort of insufficient valve to the pouch, which was situated exactly between the left auricle and the pulmonary artery. The inner surface of the aorta and the pouch showed the atheromatous process in all its stages, from the first clear transparent infiltration to the degeneration of the exudations into fatty and calcareous masses. These masses were richest at the valvular projection at the entrance into the aneurismal pouch.

The pulmonary artery and its branches were dilated, adhering with their posterior surface to the anterior wall of the pouch of the aorta; on this spot the interior surface of the pulmonary artery was also studded with atheromatous plaques.

The two anterior semi-lunar valves of the pulmonary artery stretched, as it were, so as to compensate for the inefficiency of the posterior one, whose free margin was considerably shortened by adhesions to the inner surface of the artery.

Dr. J. L. Campbell showed the *larynx, trachea, and part of the bronchial tubes* of a boy who died of membranous croup.

J. T., aged 5 years, a boy of scrofulous habit, was attacked during the early morning of the 13th ultimo with croup. I saw him at 1 P. M. He was sitting up and seemed quite comfortable. I observed, however, that his inspiration was a little prolonged, and produced a slightly stridulous sound on application of the ear to the trachea. I found also extensive bronchitis. Obtaining a good view of the fauces, I could discover no deposit of lymph. A blister was applied over the stomach and an emetic given. I was unfortunately prevented from seeing him again, as was my purpose. The treatment gave only temporary relief. The dyspnoea returned, and the child died in 40 hours after my visit, from suffocation, a considerable quantity of detached lymph having lodged in the larynx and fauces. Large quantities of the same material I learned were expelled by the action of the emetic given several hours before death.

Post-mortem thirty hours after death. Present—Drs. Smith and

Sewall. The epiglottis on its laryngeal surface was coated with lymph, the same deposit lining the entire mucous membrane of the larynx and trachea, lessening the calibre of the latter, as will be seen, to a very considerable degree.

The first division of the bronchi also coated in a similar way, the membrane being only less complete in its formation, but sufficiently so to form a complete cast of the tubes. Cutting into the substance of the lungs, a yellowish-gray material of semi-fluid consistency oozed from the divided extremities of the bronchi, which was probably the same exudation at an earlier stage. The pericardium contained a table-spoonful of serum; other organs of chest and abdomen, as far as observed, healthy.

The specimen is interesting in its bearing on the subject of tracheotomy, it being evident that, except at a very early period, in such a case as this, the operation would be ineffectual.

Dr. Finnell presented several specimens; the first was an instance of membranous croup. The specimen consisted of the larynx and trachea taken from a little boy of same age as in the case presented by *Dr. Campbell*—5 years and 2 or 3 months. The account given by the mother was, that up to half an hour before his death he seemed perfectly well, when he was seized with difficult respiration and seemed to be suffocating, and while they were deciding upon calling a medical gentleman the child died.

Post-mortem examination disclosed this condition of the larynx: Here is a patch of false membrane localized to this spot; the part of the trachea below is free from any exudation, as are the bronchi throughout. It seemed to have been an acute localized inflammation in the larynx which gave rise to this deposit, which completely blocked up the passage. It differed from the one presented by *Dr. Campbell* both in the situation and extent of the membrane. In the latter case tracheotomy would have been of no avail; in the other, probably it would have saved his life.

Dr. Clark stated that he had a single remark to make in reference to the expediency of performing tracheotomy in the case of *Dr. Finnell*. It did not appear to him that it would have been attended with any better result than in the ordinary run of cases, for this reason: The child had been sick only a few hours, and it was fair to infer that the inflammation which produced the exudation was of recent date. He thought that it was an acknowledged fact, that false membrane in croup commences to be formed at the upper portion of the tube, and so descends; that the membrane at the upper end is always maturer

than that below. He thought that the child's life might have been prolonged and a sudden death warded off; but would be of no use when it extended farther down.

Dr. Peaslee referred to another point of importance in connection with the case; the sudden development of the symptoms go to show that inflammation may be very suddenly developed, and also the exudation which accompanies it. He did not think the lesions could be present without the symptoms.

Dr. Buck thought it was difficult to conceive the formation of false membrane in so short a time. We all know how very insidious is this disease; how the intervals between the paroxysms are so complete as to deceive not only the friends, but even the physician himself. He thought it probable that these symptoms had been going on for some time unnoticed, inasmuch as the symptoms of croup at first are not alarming, and to many who do not expect it, it is thought to be merely a cold.

Dr. Clark remarked that there was a class of cases in which tracheotomy could be performed with benefit if the state of things were known during life. He had made two or three post-mortems of cases of croup in which there was a complete detachment of the false membrane from all the inferior portions of the tubes, where it had become folded upon itself, and by which doubling the larynx was very much obstructed. He thought, under circumstances of a similar nature where the membrane was being spontaneously removed, that tracheotomy would be of decided benefit. Several remarking that the appearance of false membrane on the fauces was regarded as a very important element in the diagnosis, he asked why this membrane was not found in that situation in these two cases? He would like to know how much this could be relied upon.

Dr. Clark stated that he had a definite opinion in regard to that matter. Ever since he saw the fact mentioned by Hodgkins in his "Treatise on the diseases of serous and mucous membrane," and long before *Dr. Ware* had made any statement with regard to it, he had been in the habit of looking for that appearance in the throat, and he had only the recollection of a very few cases where something of the membrane could not be seen. In one of these instances nothing could have been seen from before the velum palati, but the posterior surface was completely covered over. He thought, as a very general rule, when false membrane existed in the larynx, there were patches recognizable either upon the velum pendulum palati or tonsils.

Dr. Buck thought that the converse of that proposition was not al-

ways true; that the evidence of membrane in the throat did not prove it to be in larynx also, unless there were developed some laryngeal symptoms. This last fall, he was called to see two children sick with diphtheritic disease. A third had died of the same disease that day, and was then unburied. He saw them early in the afternoon, and found that there was an exudation upon the tonsils of the most unequivocal character, but there were as yet no laryngeal symptoms, no cough, no dyspnoea, no change in the voice other than a certain thickening from swelling of the tonsils and parts surrounding. We were very anxious in regard to this case, and apprehensive that the disease would extend to the larynx. The next morning the physician in attendance visited the case early; there was then a freedom from laryngeal symptoms, but at his visit, which was later, they began to show themselves; they increased the danger of the disease, though it was kept in check, and both recovered. One, however, immediately afterwards was attacked with acute pneumonia, and then died. In these instances it was very evident that we could mark the extension of the diseased action to the larynx by the symptoms that presented themselves.

Dr. Clark asked if it was not a law of croup that when false membrane is to form that it makes its first appearance in the throat? He could not have many opportunities of judging, because the mothers rarely send for a physician at that early period of the disease. He considered that the cases cited by *Dr. Buck* were in accordance with the usual phenomena of croup.

Dr. Buck thought it was true that, when a disease was prevailing in a neighborhood, there will be cases that show the membrane only in the fauces, without extending into the larynx. He visited a patient some years ago at Orange; the physician said he had a number of such cases from 7 to 17 or 18 years of age, several of which proved fatal. He said in some of his cases there was no laryngeal complication, the fauces alone being affected. *Dr. Crane*, of Brooklyn, had a most remarkable case of diphtheritic disease, affecting the nasal passages, fauces, &c.; also affecting the general system very seriously, producing a train of nervous disorders that lasted for weeks and months afterwards. This was unattended by laryngeal complication. I could well understand such a case.

Dr. Clark.—In the diphtheritic constitution, wherever an inflammation attacks a mucous membrane or an abraded surface occurs, the granular membrane is formed. Lately, there has been prevailing that constitution at the Nursery on Randall's Island. *Dr. Reeves* brought me an eye affected with conjunctivitis, the eye covered and eyelids

lined with granular membrane. He added, that there was many such cases there.

Dr. Peaslee remarked that inflammation commencing in any part of the air passages is liable to stop anywhere. The law is, that it travels from above downward; in one case we see it only in the larynx, others in trachea, and others still in the bronchial tubes; these different states may depend upon different diatheses of the patients. In regard to this very interesting case, it seems to him that we have not proved that mere inflammation without exudation (if there be any such thing, which he questions,) produces death. In children the peculiarity of croup is, that the exudation becomes organized and forms false membrane. Now, in this case, inflammation alone could not have killed the child; it was the exudation that killed the child, and it being poured out suddenly, caused death in a proportionately quick time. The cases referred to by *Dr. Clark* in relation to the benefit to be derived from tracheotomy in connection with the three autopsies which he made where the membrane was peeling off, show that if the system be supported long enough, till the membrane is separated, that the child would get well. It goes to show that if the child would live long enough the membrane would always be detached, either in fragments or in a mass, in which latter case the very detachment might hasten death. This view of the case is entirely against heroic treatment.

Dr. Henschel referred to the case of a child who had a brother die a fortnight ago from croup, who was taken with the same symptoms, *æt.* 8 or 9 years. The physician saw the case; although all the signs of croup were present, no patches in the fauces could be discovered. He saw the child three or four days afterwards, when it brought up a large patch of membrane, and kept doing so for three or four days. The child is now doing very well; the voice has returned with a good deal of fulness. He saw it for the last time, as a patient, to-day. He gave very large doses of calomel, which he has seen in several instances prove highly beneficial.

Dr. Clark believed such cases to be the exception and not the rule.

SELECTIONS.

Successful Operation for the Removal of the Superior Maxillary and Malar Bones. By DIXIE CROSBY, M.D., Prof. of Surgery, &c., in Dartmouth College.

As the removal of the maxillary and malar bones is one of the infrequent operations in surgery, perhaps the incidents in the following case may prove interesting to some of your readers.

The patient was a Mr. Ira Clifford, of Warren, N. H., a farmer, 55 years of age, and had previously been healthy. There was, however, a scrofulous taint in the family, and during the year 1854 it manifested itself. The cervical glands became enlarged, and the patient fell into a cachectic condition. An appropriate constitutional treatment was resorted to, and in a few months the enlarged glands returned to their original size, and the patient regained his normal tone. Aside from this, no hereditary disease was known to have existed in the family. In the summer of 1855, Mr. Clifford began to experience difficulty in masticating his food on the right side. The teeth, also, upon this side gradually became discolored. In the fall of 1856 he had a tooth extracted, and ever afterward there was a discharge from the right nostril. This consisted of pus, and the greater part of the time was extremely fetid. In August, 1857, the second molar was extracted, and this operation was followed by a good deal of hæmorrhage. In the month of September following, he first consulted a physician, who removed two more of the teeth. In October, an opening was made through the alveolar process into the antrum. Through this opening there was a considerable discharge of pus up to the time of the operation. In November, the cheek began to enlarge toward the inner angle of the eye. Early in December, a profuse discharge occurred from the right nostril, and the canine tooth was drawn. January 26th, 1858, the antrum being much distended, and the cheek continuing to enlarge, an opening was made just beneath the eye, followed by a free discharge of pus. A probe passed in at this opening, made its way through the antrum, and reached the opening previously made through the alveolar. Meanwhile the patient was treated with iodide of potassium, and the antrum injected with a solution of the chloride of zinc.

February 24th, the patient came into the hands of Dr. A. G. French, an exceedingly intelligent young physician residing at Warren, who subsequently had charge of the case. To his assiduous care and skill is due much of the success which attended the operation. February 25th, Dr. French enlarged the opening upon the cheek, but advised the patient to have the diseased maxilla removed immediately. I was called in consultation with Drs. French and Stearns, and fully coincided with them as to the propriety of an operation. Some palliative measures were advised; but in a few days the patient became

impatient, and on the 5th of March the operation was performed. There were present at the operation, Dr. A. G. French, the attending physician; Dr. Peter L. Hoyt and Dr. A. B. Crosby. Messrs. Shaw, Fellows, Smith, Crosby and Whipple, medical students, were also present and assisted.

The patient being firmly secured in a chair facing a window, chloroform was exhibited until complete anæsthesia was induced. An incision was then made, commencing at the external angular process of the frontal bone, and terminating at the angle of the mouth. The incision was in the form of a curve, the convexity being backward. Another incision was now made, commencing at the internal angular process of the frontal bone, passing down the side of the nose and separating the ala, finally splitting the lip in the course of the philtrum. An incision was now made, one inch in length, commencing upon the malar bone and passing backward along the zygoma. The whole cheek was then dissected upward, detaching it from the bone, and turned up over the eye. A branch of the coronary artery, and one of the facial, were divided, but were readily controlled by pressure. The anterior wall of the antrum was found to be partially destroyed, apparently by caries. The orbital wall was in the same condition, and the remaining walls were much expanded. On dissecting up the cheek, several ounces of offensive matter escaped from the antrum, and for a time threatened to deluge the patient's mouth. The eye being gently separated from the external wall of the orbit, a pair of strong bone pliers were applied, so as to divide the articulation between the malar and frontal bones. The same instrument was employed to divide the zygoma. One blade was introduced into the nostril and the other into the orbit, and the intervening bone cut through. The middle incisor tooth of the right side was now extracted, and a very strong pair of the bone pliers cut through the alveolar and palate processes of the bone. The remaining points of attachment to the soft parts were easily separated by the knife, and the diseased mass was removed. From the fact that the orbital was partially broken down, portions of bone remained adherent. These were removed, until all the parts remaining were healthy. The operation occupied seventeen minutes. Dr. French and my son, Dr. A. B. Crosby, took charge of the dressing. Five twisted sutures were employed: two in the lip, one on the side of the nose, and two in the curved incision. This brought the cheek fully into position over some tow which had been introduced into the cavity. Several interrupted sutures were introduced, so as to coaptate the edges of the wounds throughout their whole extent. A simple water dressing was applied, and the patient removed to his bed. For the subsequent history of the case I am indebted to Dr. French, who was so kind as to keep a record of it.

" March 5th.—Three hours after the operation. Re-action is well established in the flap. The pulse is 90 in the minute, and of good tone. The hæmorrhage has been checked by injecting a solution of alum.

6th, 9 o'clock, A.M.—Patient rested well during the night. His

pulse is 85 in the minute. Have given him food and drink through a tube. The wounds have healed throughout their whole extent. Have dispensed with all medicine, simply enjoining quiet. 11 o'clock, P. M.—Pulse 100 in the minute. Have given him a laxative of rhubarb and castile soap. Have removed the tow from the mouth, and the discharge seems healthy.

7th, 5 o'clock, A.M.—Patient has not rested well during the night. Has a pulse of 60 in the minute; extremities cold, and a disposition to sink. Have resorted to friction, and administered brandy and quinine. 8 o'clock, A.M.—Pulse 70, and of sufficient tone.

8th, 9 o'clock, A.M.—Patient has slept well. Pulse 70. Have continued the stimulants and tonics.

9th.—Patient is doing well. Pulse 65, and of good tone. Have removed the middle suture on the cheek. The parotid gland is somewhat enlarged.

10th.—Patient continues improving. Have removed the remaining sutures, and applied adhesive strips and collodion. The discharge from the cavity is now moderate and healthy. Have given an enema to procure a movement of the bowels. Have ordered porter and quinine.

13th, 15th and 18th.—Everything has continued favorable, and the patient is constantly improving."

Sometime after this, I received a letter from Dr. French, saying that the wound over the zygoma had re-opened. I suggested there might be a speculum of bone which had caused the mischief, and advised a thorough probing, and its removal, if found to be the cause. I received another letter, bearing date of May 3d, from which I make the following extract:

"Mr. Clifford came down to see me last Saturday, and feels first-rate; says he has no doubt but he should be able to walk four or five miles! Has a good appetite; rests well, and is free from any pain. The opening upon his face has closed up."

I have since learned that the patient is quite well, and the deformity much less than might have been expected. Judging from the appearance, I do not think the disease was cancerous in its character. I intended to have examined the morbid specimen under the microscope, but was prevented from doing so until it was spoiled. Considering the progress the disease had made before the operation, the result has been much more favorable than we had any right to expect.—*Boston Med. & Surg. Journal*.

Dartmouth College, Hanover, N.H., June, 1858.

Tubercular Phthisis; the Result of imperfect Cell Action. By R. E. HAUGHTON, M.D., Richmond, Ind.

I regard consumption as both a constitutional and local disease, the local disease being the result of the constitutional. Then the mode

of cure is to arrest the general disease by removing the causes. Impairment of the blood is the chief condition which gives rise to manifestation of symptoms and the means which restore it to a normal condition, and the system to such a condition as shall manufacture good blood, are the curative means. Fresh air, exercise, and good digestion and assimilation are among the important means. Drugging the stomach will never do this—an organ already frequently impaired by exercises of various kinds. Then why derange it still more? There may be times when a tonic will do much good if wisely selected, but the indiscriminate medication in this disease is an evil to be greatly deplored. In impairment of the stomach, pepsin may be introduced with a view of assisting digestion, as this article possesses the power, in combination with the acids of the gastric juice, of dissolving articles at a proper temperature out of the stomach. The experiments of Wasman* upon this subject are to the point. Next, the introduction of such food as can be easily digested and assimilated, and which contains the elements of repair in their best combination to suit the condition of the functions of absorption and assimilation. By this means we change the blood-mass, and oxygenation is perfecting the great work of the perfect assimilation of the chyle into blood. But again, if we fail because of the structural change in the lungs, or because digestion and assimilation are not performed, we can do more. I now propose *transfusion of blood* as affording a means of changing the blood-mass, thereby changing the conditions of the system, re-invigorating the brain, and sending out increased nervous energy, and promoting digestion and assimilation, and thereby placing the system in a condition to return to health and vigor. If we thus change the blood-mass, tubercle ceases to be deposited. When it ceases to be deposited, the great work of cure is partly accomplished, and then the removal of those already deposited, or rendering them inactive and latent, or producing absorption, completes the cure. If cavities have been formed, by supporting the general health in this way, these cavities will soon cicatrize, and a cure is the result. It is well known that tubercular depositions take place by successive crops, and softening in the same way, hence, arrest the deposit by changing the blood, and if softening of the first crop takes place, that is the end of it, no more to soften. And how many pass through several periods of softening, with the increasing irritation still added, till worn out by the continual destructive change, which thus takes place in the lungs. I do not know that transfusion of the blood in consumption was ever thought of or recommended in the treatment of this disease, but I arrive at it from the pathology, which I regard as true, and it recommends itself because it is the *thing* the diseased system cannot do for itself, change its own blood, or manufacture it anew, because of the failure of the blood manufacturing powers of the economy. Iron is one of the elements of healthy blood, and this is deficient in all those cases, and which in transfusion is directly furnished in its proper relations, and can be thus appropriated to its proper use in the economy. So it is

* Carpenter's Physiology.

with the other elements thus furnished, and we have the very thing at once effected, which has so long failed to be done in any other way. Transfusion is successful in cases of hæmorrhage, where the system is exhausted and anæmiated, and why not be successful in other cases where the blood is diseased, and the cause of the *local disease*? Some would object to this, because the patient should not be subjected to such a process. The irritation is small compared with the irritation often kept up with drugs, from day to day, without any corresponding benefit. This plan or mode of treatment must give strength because from the blood are deposited all the tissues, and all the secretions are from the blood, and if this be a pure article, then must all the results flowing from it be good, "for it is written, 'the blood thereof is the life thereof.'"

Again, show me a patient whose system manufactures good blood, even if the lungs are diseased, and I will show you one who is not very likely to die of consumption. When the function of the lungs is interfered with, I know very well that the blood is not well aerated, and there is a tendency to deterioration of the blood, and if there is no effort at expansion, the deterioration will go on. For the mode of performing transfusion, the plan proposed by Ramsbotham, in his work on the Process of Parturition, page 333, is sufficient. The history of transfusion dates back to more ancient days, and afterwards fell into disuse, till the practice was again restored by Dr. Blundell,* in cases of dangerous and copious hæmorrhage, in lying-in women. The names of Hamilton, Davis, Velpeau, are referred to in reference to this subject; as also Denman, Leacock, and Lane. That transfusion is not circumscribed in its benefits to one form of trouble is quite certain; and that it has never been before tried or suggested in any case of scrofula or consumption that I am aware of, and it has quite as much to recommend it in those cases, as in those where it has been used, I am quite certain. The experiments upon which the doctrine of transfusion is founded were performed by Dr. Leacock, and made known in an inaugural thesis, published in Edinburgh in 1817, and afterwards the experiments were repeated and varied by Dr. Blundell. The experiments prove that healthy human blood is alone fit for the purposes of transfusion, and this is, of course, eminently true in the condition of the blood which obtains in consumption. But leaving *this* for the present, we have a few suggestions to make in reference to some of the other means which may be used beneficially in the treatment of cases of consumption. In place of cod-liver oil, I find that rich cream or very rich milk answers a much better purpose, from the fact that it does not nauseate the stomach, and contains the oil or fatty elements which are easily and beneficially appropriated to the uses of the system, without impairing digestion and assimilation. As a tonic, some preparation containing iron is evidently best suited to most cases of tubercular disease, and frequently improves the appetite and digestive power. I am treating a case at the present time, in which the Syrup Iod. Ferri. is most strikingly beneficial, a few

* (Physiological and Pathological Research, 1824.)

doses of which, in this case, improves the appetite when almost entirely deficient, and beef will be craved and apparently well digested. This preparation of iron, in another case of a child, where both scrofula, as manifested in glandular enlargements, and also a diseased condition of the lungs existed, acted like a charm in removing the morbid conditions present. Exercise in the open air every day, and rich diet, as cream, butter, and the gravy of beef and pork, was allowed *ad libitum*, and at the present time the child is fat and hearty, cough gone, emaciation gone, glandular enlargements gone, and the child bids fair for long life, as any child of its age. Of the various complications of consumption I have not spoken, and of some of the forms of disease which often precede it and lead to its development, when not arrested by treatment. These subjects are not spoken of in the previous papers, of which this is a part and the conclusion. Of these I may treat hereafter, and of the modes of treatment which may successfully counteract and cure after development of the disease. I shall not continue, at present, any views upon this subject, but ask for that part of treatment by transfusion in tubercular diseases a candid investigation of medical men, and for the pathology upon which it is based refer them to the November and January numbers of the *Medical Independent*, Detroit. There are corresponding evidences of the value of a similar treatment by the use of the blood of animals in the treatment of tubercular hæmorrhage; of the same in the exhaustive diseases of children, where it has been given as an internal remedial agent, subject to the process of assimilation. The authority in these cases is sufficient, and the evidence of benefit and cure well authenticated by the medical journals of foreign publication.—*Cincinnati Lancet and Observer*.

Removal of an Ovarian Tumor, in which the Ecraseur was used. By JOHN L. ATLEE, M.D., of Lancaster, Pa.

On the 29th of January, 1858, I was called to see Mrs. E. E., of this city, in consultation with Dr. James Rodgers. She was then in her sixty-first year; commenced menstruation at seventeen; married at the age of twenty-three, and had never conceived. Her menses continued until the age of fifty-two, with occasional slight intervening leucorrhœa, and had always been more or less painful, and somewhat profuse. On one occasion, about two years after her marriage, she had uterine hæmorrhage, which weakened her and kept her confined to bed for a few days. Soon after the cessation of the menses, she had an attack of erysipelatous inflammation of the face; since which time, until the winter of 1856-7, her health had been very good. Her husband died four years ago. Some time in January or February, 1857, she became troubled with flatulent distension, as she supposed, of the lower portion of the bowels, and a frequent inclination to pass urine, although the quantity discharged was trifling. She had also occasional pain on each side, just above the groins, which re-

sembled the pains of menstruation. On the 5th of August, finding her symptoms increase, she consulted Dr. Rodgers, who, upon examination, discovered a tumor occupying the whole lower portion of the abdomen, with evident fluctuation. A course of diuretic and hydragogue cathartic treatment, combined with mercurials, was instituted, and perseveringly carried out by him alone, and subsequently in consultation with a highly respectable and experienced physician, with no other effect than to debilitate the patient. The size of the abdomen gradually increased; and on two occasions Dr. Rodgers was of the opinion, from the severity of the pain, that peritoneal inflammation existed in the left iliac region. The patient now complained so much of the discomfort arising from the distension, that, on the 17th of December, her physicians removed eight pounds of a highly albuminous fluid by tapping. A tumor of considerable size remained, occupying the left hypogastric, iliac, and lumbar regions. The character of the disease being now understood, all active treatment was suspended, and the patient placed upon a more generous diet. The only medicine given was a mild saline aperient, to regulate the bowels. Four and a half weeks after the first tapping, a similar amount of fluid was drawn off by Dr. Rodgers. Two weeks after this I was requested to see her. I found the abdomen as large as at the full period of pregnancy. There was evident fluctuation over the whole of the right side of the abdomen, extending to the left hypochondriac and upper portion of the lumbar regions. A very hard tumor occupied the lower portion of the left lumbar and iliac regions, pressure over which occasioned severe pain. Upon examination, per vaginam, I found the neck of the uterus occupying a central position in the pelvis; the left side presenting a tumor without fluctuation. On the right side a tumor could be felt, covering the brim, with evident fluctuation when the tumor was percussed from above. I diagnosed a multilocular tumor of the left ovary. Owing to the great oppression and pain arising from the pressure of the cyst, we tapped her again on the 3d of February, less than three weeks from the last operation, and eight and a half pounds of fluid were removed, containing so much albumen that it coagulated perfectly by heat. This rapid filling of the cyst had caused great emaciation, and it was evident that, unless resort was had to the removal of the cyst, she could not long survive. Her pulse ranged from 90 to 100, and, occasionally, was above that; it was small and irritable, and quickened by mental emotion and exercise.

Three days after the last tapping a careful examination of the tumor was made, with reference to the practicability of an operation. The large remaining tumor, now that the abdomen was relaxed, could readily be moved to the opposite side; and inasmuch as the severe local pains, which existed when the abdomen was distended, were immediately relieved after tapping, I had reason to doubt the existence of much previous peritoneal inflammation, and consequent adhesion. After representing fairly and candidly all the dangers of the operation, in the presence of her attending physician and immediate friends, she was left to decide for herself—my opinion having been given that it

was practicable, and would be successful. At all events, should dangerous adhesions exist, the operation would be abandoned, and the wound closed; as had occurred to me in a previous case, with a favorable result. After various delays, and another tapping on the 3d of March, at which ten pounds of albuminous fluid were removed, she finally demanded the operation; being sensible, from the rapidity of the filling of the cyst, and her increasing debility and emaciation, that it could no longer be delayed. The day previous the bowels were freely evacuated, the patient restricted to cold water, and in the evening twenty drops of elixir of opium administered, to keep the bowels quiet. At midnight she took a second dose. Thirty drops were given on the following morning, the 23d of March, on which day, at noon, I proceeded to the operation, in the presence of Drs. Rodgers, Parker, Parry, Ehler, M. M. Nithens, and John L. Atlee, Jr., and Messrs. Weiger, Brensman, and Frick, medical students. The temperature of the room had been elevated to 80° F., and it was steadily maintained at that for several subsequent days. The bladder having been evacuated before placing her on the table, she was put under the influence of ether and chloroform, and an incision made through the skin, cellular and adipose tissues, to the fascia, from one inch below the umbilicus to two inches above the pubis. The fascia and peritoneum were then successively divided upon the director to the extent of the external wound. The large cyst was now exposed, occupying the upper, lower, and right side of the abdomen, presenting, on its left aspect, a deep sulcus between it and a second cyst, which filled a large portion of the left lumbar and iliac regions. The hand was then introduced, and the adhesions caused by the previous tapplings separated, as were also a few between the right abdominal wall and the cyst. It was then swept across the fundus of the cyst, and passed down between it and the omentum, so as to detach it in the few places where slight adhesions existed. Trochars were now introduced, and both cysts rapidly evacuated, the smaller one containing about four pounds of a straw-colored and less viscid fluid. Several smaller cysts, two or three times as large as the fist, were developed in the base of the tumor, rendering an enlargement of the wound, one inch at each extremity, necessary, before it could be drawn out. No other adhesions were found, except at the pedicle. The tumor, in its development, had deviated from the usual course. It had expanded the broad ligament, and encroached upon that portion of the peritoneum existing between it and the colon, so as to leave the pedicle but one inch long, four inches broad, and highly vascular, for the application of the ligature. In conversation with my brother, Dr. Washington L. Atlee, in February last, he had recommended the "écraseur" for severing the pedicle, and, as I had seen at least one fatal result from the application of the silk ligature to the pedicle too near to the colon, and as the use of the silver ligature of Dr. Sims, although less irritating than silk, would leave the proximal portion of the pedicle a sloughing, irritating mass within the abdomen, I determined to use the *écraseur*. The whole tumor being firmly drawn up and held steadily by my son, I surrounded the

pedicle with the forefinger and thumb of the left hand, and grasped it very firmly. The chain of the instrument was now passed round it above the hand and very close to the tumor, and moderately tightened. By maintaining this position of the left hand very firmly—the screw of the instrument being held by an assistant—I was enabled to operate upon the lever with the right, and to prevent the colon from being drawn toward the chain. The lever was turned for half a minute, then stopped for half a minute, and so alternately until the pedicle was severed, occupying six and a half minutes. (The colon had entirely escaped, with a margin of peritoneum one inch wide.) The torn surface of the pedicle was then carefully sponged and examined; the abdomen was kept closed for several minutes, and no hæmorrhage, nor even oozing of blood from it, could be detected. The fluid which had escaped from the cysts was then sponged out, and the external wound closed by four silver sutures (kindly sent to me by Dr. J. Marion Sims) and adhesive strips, supported by a compress and flannel bandage. During the whole operation the patient suffered but little pain; her pulse, which was 90 at the commencement, remained so when she was put to bed; the only variation was at one period, when for a few moments it became sensibly weaker, and a slight paleness overspread her countenance. There was no nausea or vomiting then, nor at any subsequent period. The whole weight of the mass—solid and fluid contents—was seventeen and a half pounds. Three hours after the operation the patient complained of a *screwing* pain low down in the left side, and occasionally a shooting pain in the same region. Pulse 86, and slightly intermittent; nose cold; skin of arms and hands warm, and a little moist. Has taken nothing but ice and iced water; at two o'clock she took thirty drops of the elixir of opium, having taken thirty when put to bed at half-past twelve o'clock.

5 o'clock, P.M. Patient complains of a strong inclination to pass water. Introduced catheter, and drew off sixteen ounces of straw-colored urine with acid reaction—more, she says, than she had passed altogether during the previous week. Pulse 92, intermitting every eight or ten strokes; has less pain in left side; more in her back; slept nearly an hour; nose quite warm, as is the whole surface, with more fulness and quickness of the pulse; reaction evidently commencing.

7 o'clock, P.M. Patient now entirely free from pain; pulse 96; skin a little hotter than natural.

9½ o'clock, P.M. Patient quite free from pain; skin very moist; heat natural, except of palms, which are hot; catheter removed six ounces urine; thirst considerable; at 8 o'clock took 25 drops elix. opii.; pulse 102; sleeps at intervals. Since the operation she has been more or less troubled with flatulence, without pain.

Wednesday, March 24th, 8 o'clock, A.M. The report this morning is highly favorable; the patient smiled when I entered the room, and says she feels very well; she slumbered nearly all night, waked at intervals and asked for drink; she has no pain, and the only complaint she makes is that the wind is *rumbling* in her bowels; pulse 84, soft, and has lost its quickness; skin, including palms and soles, perfectly natural; perspired all night. It appears as if the reaction, which

commenced at 5 o'clock yesterday, has entirely subsided, and left her with a better pulse than I have known her to have since I commenced my attendance upon her. Removed by the catheter eight ounces of urine; mind calm, clear, and hopeful; she completed her sixty-first year on the 8th inst.

12½ o'clock, P.M. Patient in all respects the same, except pulse, which is 90; to continue cold water and ice, *pro re nata*.

7½ o'clock, P.M. Patient still lively and comfortable; pressure on the abdomen in the left iliac region gives some pain or feeling of soreness; has passed wind from the bowels this afternoon; bladder troublesome; removed by the catheter ten ounces of urine, of normal color and acid reaction; pulse 79. The intermission in the pulse, remarked yesterday, passed off during the night, and the action of the heart has been perfectly regular all day; tongue clear, skin moist, and of natural temperature; to have 25 drops elix. opii.; allowed thin arrow-root gruel during the night.

From this time until the 27th of March, 5th day, no unfavorable symptoms were manifested; the patient, on the contrary, steadily improving; examined the wound, and found it united throughout the whole extent, the lint covering it as clear as when first applied. There had been no serious discharge from the abdomen, as in all my other cases where the ligature was removed; no trace of inflammation around the silver sutures, which were removed on the 7th day; on this day she sat up for the first time out of bed.

From this time my patient sat up daily; on the 9th day the bowels were moved, for the first time, by a dose of castor oil; the discharges consistent and natural; she had been gradually allowed a more generous diet, and was increasing in strength.

On the following Monday, the 14th day, she rode with me half a mile, to my office, to see the tumor, and since then she has remained perfectly well.

This case is the eighth on which I have operated for the removal of enlarged ovaria, in two of which both the ovaria were diseased and removed, one only proving fatal, the patient dying on the 12th day. In all the previous cases I could perceive the disturbing effect of the presence of the silk ligature around the pedicle, as well as of those used to restrain hæmorrhage, and until they came away they were more or less a source of anxiety both to the patients and to myself. With the écraseur to sever the pedicle, and the use of the silver suture and silver ligature, where ligatures are necessary, I am satisfied that a very large share of the dangers attending the operation will be obviated. Mrs. E. is the oldest patient upon whom, I believe, the operation has been performed—Dr. Clay, of Manchester, England, reports his two oldest at 57 and 58; she was excessively reduced by the frequent tapping and refilling of the cyst, as well as by the previous very active medical treatment to remove the dropsy, and yet she recovered more rapidly and with much less constitutional disturbance than any other patient upon whom I have ever performed a capital operation. This I attribute very much to the use of the écraseur and the absence of any ligature involving the peritoneum.—*N. A. Medico-Chirurg. Review.*

Treatment of Nursing Sore Mouth. By M. L. KNAPP, M.D.

The first case of the nursing sore mouth affection that fell under our observation and care, and the first time we remember to have heard of this popular name for a disease, was at Springfield, Illinois, June, 1835; the memorable year of scanty vegetable supplies, and lamentable state of the public hygiene before spoken of.

The patient resided in the village, and was suckling her third child, an infant then about eight months old. She had been laboring under the affection three or four months before our advice was solicited, and had been treated without marked or permanent benefit. It was an habitual affair with her; she had had an attack during each of her former periods of lactation, in the State of Massachusetts, from whence the family had emigrated; had weaned her infant on each occasion to save her own life, and both had died of cholera infantum; and her infant at the breast was laboring under it. Her medical attendants advised, insisted, indeed, on the weaning of the infant as her only chance of recovery, but she pertinaciously refused, and fell under our care.

Our impressions, on first seeing the case, were, that the woman was mercurialized—she seemed to be laboring under a moderately severe pytalism. Her mouth was sore, sensitive to hot drinks, she could not masticate solid food, and still there were no very distinct ulcers to be seen; but there was a general scalded condition of the mouth, with pytalism and a foetid breath. She was very anæmic, of almost alabaster paleness—had a diarrhoea that no remedies seemed adequate to control—much pain and tenderness of the abdomen—was very much emaciated—so weak she could but just get up, and occasionally walk about—there was a tendency to fainting and swooning that had excited the greatest alarm, and threatened to prove fatal on several occasions—she was exceedingly desponding, and continually apprehensive of evil. One circumstance alone seemed favorable—her appetite was good.

After a full and careful investigation of her condition, we had no difficulty in diagnosing this nursing sore mouth case to be of a scorbutic character, and the result of treatment abundantly verified our diagnosis. Lemon juice, loaf sugar and water, with brandy and a little morphine, constituted the main medical treatment; and as to diet, we fed her on strawberries and ice cream; bread and milk with strawberries; clabbered milk with sweet cream and sugar; stewed currants; stewed gooseberries; panada made with champagne wine, etc., allowing her as much variety as the scanty vegetable supplies of that spring afforded. All the old potatoes had long been exhausted, and new ones had not come in. All the small fruits of the season were freely allowed, and if not fully ripe were stewed. Custards were also a standing dish in her dietary. Animal soups, and broths too, with cabbage, carrots, etc., added, and highly flavored with savory herbs, and well seasoned with salt and cayenne pepper, were ordered daily at her dinner meal. Under this generous dietary, *gradually adopted*, the bowels at the same time restrained with brandy and sugar, and a

little morphine, regularly administered; with daily ablutions and frictions of the skin, and a draught of solution of bicarbonate of soda, about half an hour after every meal, the patient was rapidly restored to health; *and the puny infant also*. In three weeks the mother was restored to a better state of health than she had enjoyed since the birth of her infant. She nursed her infant through the summer, having a greatly increased flow of milk, and escaped the bilious fever, which was so strongly epidemic that season. The infant, though it recovered from its summer complaint without medication, took the ague in September, and was afflicted with it more or less through the following winter.—*Knapp's Primary Pathology*.

EDITORIAL AND MISCELLANEOUS.

The Academy of Medicine had an extra session in June, at which the topic of interest was a discussion of the structure and functions of the prostate gland. By the appointment of the Section of Anatomy, Dr. W. H. Van Buren opened the subject. After going over the anatomy, both general and microscopic, of the organ, Dr. Van Buren expressed his opinion as to its functions, to be, that it is in no proper sense a gland; that it is, or a portion of it is, considered anatomically, the analogue of the uterus in the female, while its pathological developments, by their similarity to those of the uterus, make the analogy still more complete; and that the purpose of the muscular mass constituting the body of the organ, is to enable it to eject the semen.

This the speaker considered as its real function and the purpose for which it is designed. The existence of the third lobe was questioned, and the erroneous notions arising from that name given to a portion of the isthmus, commented upon. An interesting discussion followed, which was shared by several of the prominent members. In the course of it, the opinion was expressed, that enlargement of the prostate is not the uniform result of advancing age, but the exception, and that it is as yet impossible to say to what it is due. Dr. John Watson, in the course of his observations, made a remark of great practical interest and value. He said that he believed that many cases of retention of urine in elderly men were ascribed to enlargement of the prostate when there was no such thing. He had been called to relieve them, and wished to draw attention to their actual condition. In consequence of the sluggish movement of the bowels, the colon especially,

the sigmoid flexure becomes loaded and distended, and occupies the pelvis on the left side. If now the bladder is allowed to fill beyond a certain degree, and to become at all distended, it is very evident that it cannot occupy the space on the left side of the pelvis, to which a portion of it would naturally reach. The bladder is, therefore, crowded to the right, and that in proportion to the degree of distension of the bladder and of the colon. From this crowding the neck of the bladder is carried to the right, and forms a valvular passage instead of a straight tube, and this valve entirely shuts off the escape of the urine. The ordinary manipulations for passing a catheter beyond the middle lobe of the prostate will not relieve this retention, but the difficulty can be overcome by simply turning the beak of the instrument to the right after it has reached the neck of the bladder, when it will readily pass into that viscus. The preventive of its recurrence, is to keep the bowels freely opened so that accumulations may not again occur in the colon. It is proposed to resume the discussion at another meeting.

At the July meeting puerperal fever again came up, and Dr. Clark gave a full account of his use of large doses of opium in the treatment of that disease. Dr. C. does not recommend this treatment for all forms of the disease, but only for puerperal peritonitis, a distinction which it is very important to make. For success in its use, the patient must be taken soon after the appearance of the disease, and its effects must be carefully watched, some patients requiring much more than others will bear. The particulars of this treatment have been pretty fully laid before the profession, and it is not necessary for us to repeat them.

Dr. Barker said that he thought that the subject was far from being exhausted, and that if the Academy were not wearied with it he should be willing at some future meeting to touch upon some interesting points which still remained. He then proceeded to reply briefly to some of Dr. Clark's positions, and gave a condensed but lucid sketch of the discussion of the same subject by the Academy of Medicine of Paris. At the conclusion of his remarks a vote was passed unanimously, requesting Dr. B. to continue the discussion at the August meeting.

—Few of our readers can have failed to notice that a great excitement has been raised in this city, by the accounts published by one of the weekly illustrated newspapers, of the condition in which cows are found which are kept in the city for the purpose of furnishing milk to the citizens. The wood cuts illustrative of their state aroused the at-

tention of those who had frequently seen the same statements in print without giving any heed to them. To hear that an animal has to be held up in a swing to be milked because it is too weak to stand, or to hear that when treated in certain ways, cows are covered with sores and lose their tails, though still milked, makes much less impression on the mind than when the same facts are set forth by good wood cuts. So much attention has been drawn to the matter, that the public instinctively turn to medical men to learn how much injury to the public health results from using such milk. We have regretted to observe that in their replies, physicians have been too prone to give their theoretical objections, rather than their opinions fortified by facts. Some have not hesitated to ascribe the large mortality of infants in New York to the use of milk from these animals—commonly called *swill milk*. Others, though hesitating to go this absurd length, still allege that the milk is of necessity injurious to all, adults or others, who use it, because it comes from diseased animals; while a third class has been found who declare the milk to be pure, good, and wholesome.

What is the cause of such diversity of opinion, but a failure to note facts bearing upon the subject? That milk causes by its use a large proportion of the diarrhœas of young children, which so often terminate fatally, is not to be denied. But it is not shown that it is *swill milk* that is used. In point of fact, it is not, in the majority of cases. The purest milk from a healthy, clover-fed cow, will frequently, if given to a very young child, cause a most severe diarrhœa; and perseverance in its use would be fatal. The country milk furnished to us of the city in the morning, is from the milking of the previous evening, if not of the previous morning, and is at least twelve hours old when delivered at our doors. A weaned child, therefore, that depends on it, cannot have new milk at all, and if fed during the night its milk must be nearly thirty-six hours old. During this time it has been jolted from the farmer's house to the railroad depot, has been jolted from the country depot to the city, and been jolted about the city by the milkman. It is not in the nature of the best of milk to bear all this, especially during weather in the least degree warm, without undergoing serious changes. By experience the milk dealers have learned to guard against some of these changes, by adding various substances, as soda and salt, to the milk; but even these additions render the milk unfit for infants. It is then evident that the milk from animals in the city is not exposed to all this jolting, and can be delivered to customers soon after it is taken from the cow. Thus far, then, it has the advantage over milk brought from the country.

But the important question with reference to it is, is its composition the same with the milk of country-fed animals? and if not, does it differ in such respects as make it unfit for food? and especially, is it unfit for children?

Reference to the valuable article in this number on the subject of milk, together with that by Dr. Cummings, in the preceding volume, will enable one to judge of the fitness of swill milk for infants. Chemical analysis shows that it contains a much larger proportion of casein than the milk of grass-fed animals, and a much smaller proportion both of butter and lactine, or sugar of milk. Now, as compared with woman's milk, that of grass-fed cows is too rich in cheese and too poor in both butter and sugar, for which reason it is that in feeding infants with cow's milk a portion of cream has to be added to it to increase the butter, and loaf sugar to sweeten it. The *swill milk*, then, being much more deficient in both of these elements, is to a greater degree unfitted for use in the artificial nursing of children; and if the proportion of butter and sugar is as small as the chemists report it to be, the swill milk is almost entirely unfit to use for infants, and would be put poor diet for older children.

Still we are not prepared to say that it is worse than much of the country milk that is sold in town. The salts added to that have been alluded to, and when we take into consideration the fact that in many of the milk districts a portion of the cream is removed every day, it seems doubtful if it is much richer in butter than *swill milk*.

The effect of disease upon the milk is a separate matter, and one that is not so easily decided upon. We should not wish to use the milk of a cow covered with sores, and yet it might be difficult if not impossible to show that it is injurious. Women, with varicose ulcers, nurse their children with success, so that the existence of a sore is not of necessity a decided proof of the inferior quality of the milk. But the burden of proof remains with those who vend the milk from diseased cows, and till they can show that it is not injurious, they ought to be prohibited from selling it.

— *Pure* cod liver oil is by no means secured by buying bottles which are so labelled, and in some investigations as to the purity of this article, we have come to the conclusion, that not a little lard oil passes itself off as the genuine article. To this fact we attribute much of the dissatisfaction which is experienced by physicians in prescribing it, and its frequent failure to agree with the stomach of the patient.

During the last winter our attention was called to the article sold by Messrs. Hazard & Caswell, of Newport, Rhode Island, and we

have been very much pleased with it. In fact, it seems to be the cod liver oil, fresh and unadulterated. It is prepared for them at Block Island, which is in a portion of the Atlantic abounding in these fishes, and they are taken in large numbers close to the island, and brought on shore to be dressed. It is thus possible to obtain the livers in the freshest condition, and from them the oil is immediately separated. So rapidly is this done, that the oil is sometimes on sale in New York forty-eight hours from the time the fishes were caught. The manufacture being overseen by a professional gentleman, who takes every pains to secure its purity, we do not see that anything is left to be desired. The oil is of a light straw color, has none of the strong, rancid fish odor which we usually attribute to it, but is sweet and pleasant to the taste. We have had patients use it who have tried almost every manufacturer's oil, and give this a decided preference. It is easily digested, and does what is expected of it. Physicians will find their patients will be benefited by using it, when they need to take this oil.

— Quite an energetic movement is making in this city to endorse the claims of Dr. Morton, of Boston, as the discoverer of the anæsthetic properties of sulphuric ether. A paper is circulated for subscriptions, recommending that a large sum be made up for him, and it is being very generally signed. Probably very few of our physicians are fully aware of the real claims in this dispute, and we know that some signatures have been added for the sake of not appearing to be odd. Had the paper been an endorsement of Dr. Jackson, it would have received most of the signatures which it now has, and some which it now has not. The last visible movement in Dr. Morton's favor is thus recorded in the proceedings of the Board of Ten Governors, who have the management of Bellevue and several other hospitals.

Mr. Gunther offered the following resolution:

That this Board view with high appreciation the initiatory steps taken by the Medical Faculty of the city of Boston and of New York, to acknowledge, in a substantial manner, the discovery and appliance of sulphuric ether, by Dr. Wm. T. G. Morton; and believing the same to be, as expressed and set forth in their testimonials, the greatest benefit of the present age rendered to science and humanity, deem it our duty in consideration thereof, and of the many uses to which the same has been applied in the Institutions under our charge, to vote towards the National Subscription Fund, as instituted by the Faculty, the sum of \$1,500.

The mover of the resolution spoke of the miraculous power of the vapor of sulphuric ether to produce a safe insensibility to pain during surgical operations. It is generally conceded by the Medical Faculty

of this country and Europe that the discovery of this anæsthetic agent was due entirely to Dr. Morton, who, by years of experiment and sacrifice of a fortune and loss of physical and medical faculties, was instrumental in giving the benefit of his researches to the world. He hoped the slight testimonial now asked for would be unanimously given.

Mr. Maloney said he was not prepared to vote on this subject at present; it was a matter entirely new to him. He would prefer to have it postponed until a future occasion, so that he could vote understandingly in giving away of the people's money.

Mr. Townsend thought the Board had no right to vote to make such an appropriation for such a purpose. It was their duty only to take care of the paupers and criminals—at least, he thought it could not be done unless reported on by a Committee.

The subject was referred to the Committee on Bellevue Hospital to report.

—The attention of the public has been already called to a unique and beautiful monument to the late Dr. Wm. Kelly, of the Blackwell's Island Hospital, which has been lately completed at the marble yard of Inslee & Co., corner Bowery and 3d Street. Within the past few days it has been removed to Utica, N. Y., where, as a cenotaph, it will record the memory of a worthy son and brother, and recall to his medical brethren their sad loss of a valued member, stricken down almost at the onset of his professional race.

Dr. Kelly was of Scotch descent, and a native of Charlton, Saratoga County, N. Y. He was graduated at Union College in 1841, and remained in Schenectady, as a fellow of that institution, during the four succeeding years. In 1845 he took charge of the Union College Grammar School, in connection with David H. Chettenden, D.D., (since well known as an able educator and lecturer,) and at the same time commenced also the study of medicine with Dr. A. M. Vedder, of Schenectady. In 1847 he came to New York to attend lectures, and in 1848 took the degree of M.D. from the College of Physicians and Surgeons.

Soon after graduation he received the appointment of Assistant Physician to Bellevue Hospital, then under the Presidency of Dr. David M. Reese. The organization of Bellevue Hospital then included all the various institutions on Blackwell's Island (since put under separate organizations,) and the Long Island Farms or Nursery, then located at Ravenswood, before the purchase of Randall's Island.

These were all under the Resident Physician of Bellevue, and of each his staff had in turn the charge. The change of system in 1849, which abolished the office of Resident Physician at Bellevue, found

Dr. Kelly in charge of the Penitentiary Hospital, and his service had proved so entirely satisfactory to the Ten Governors, that by a unanimous vote he was continued there as Resident, with an increase of salary, and the privilege of selecting his own assistants.

From this time until his resignation, in October, 1853, Dr. Kelly's discharge of duty was most exemplary and faithful. The field was one which gave peculiar exercise to his abilities, and the rare qualities of his mind and heart were fully tested. The ingenuousness of his address, the strong Christian principle that governed every act and curbed a temper naturally impulsive, made his daily influence in the hospital a blessing to his patients, and a most conservative and valuable example to his assistants. No one of his staff will soon forget that constant exercise of manly sympathy and kindness, which, pervading the house through his presence, made the wards attractive not merely as a field for medical observation, but no less so as a school for the gentler charities.

We cannot too much regret that Dr. K.'s sudden death left his manuscripts incomplete. His observations upon uterine disease and the varied forms of constitutional syphilis he would undoubtedly have published, had he lived to settle in New York.

After leaving the hospital, in the autumn of 1853, he prepared for a tour in Europe, and especially for a sojourn in Paris, to complete, under Ricord and others, the investigation of those subjects which interested him most. On the 27th of December, 1853, he sailed for Havre in the packet ship "*Constitution*," in company with Dr. Churchill, of Utica, an intimate friend and former student.

The terrific gale of December 29 will long be remembered by those who mourn the loss of friends in the ill-fated "*San Francisco*." In this storm the "*Constitution*" also went to pieces. On the morning of January 1 the captain of the Belgian brig "*Bellona*," drifting under bare-poles at a most fearful rate, passed, off Cape May, the wreck of a vessel, on whose stern he read by the gray light of dawn the name "*Constitution*."

This is the sole record, and here the history ends. Not one of the ship's company survived; and though the friends of Dr. Kelly for two years clung to the hope that he had perchance been picked up, and might yet return, it was a hope that no joyful experience has ever verified. With the reluctance of grief to acknowledge its loss, they have at last recognized the truth, and his surviving sisters cherish his memory in this monument.

The design is wholly original, and is the work of *Dr. F. N. Otis*,

the "artist surgeon" of the steamer "*Moses Taylor*." It consists of a corinthian column, of fair proportions, riven, as by a thunderbolt, from its capital nearly to its base; while from the centre rises, superior to the shock, a delicate cross in full relief. The cubical base is inscribed as follows—on one side:

"DR. WILLIAM KELLY,

Late Physician-in-chief of the Blackwell's Island Hospitals, New York City;
who sailed for Havre in the ship 'Constitution,' and was lost in the
wreck of that vessel off Cape May, December 31, 1853.

Æt. XXXIII."

On the second:

"THE BELOVED PHYSICIAN."

On the third:

"JESUS SAITH UNTO HER, THY BROTHER SHALL RISE AGAIN."

On the remaining panel an elaborate intaglio represents a ship foundering at sea. Its hopeless struggle with the tempest is illumined only by a single star, which pierces the lowering clouds, and seems to send a ray of hope, the promise of a higher light beyond the present darkness. As a friend has most forcibly observed, "the first and fourth panels tell a most truthful tale to the most casual observer; the second, that to those unfortunates for whom the world has no charity, but to whom he devoted his best years in hospital service, he was indeed 'the beloved physician.' The third belongs peculiarly to the sorrowing sisters, and is a memorial at once of their affection and their faith."

To say that the monument is fully worthy of the subject, is sufficient. Time has well nigh closed the gap occasioned by our friend's departure, but the lesson taught by a hasty review of his life and his melancholy fate is still fresh and emphatic. "*Non omnis moriar!*"

— Dr. J. C. Nott has resigned the Chair of Anatomy in the University of Louisiana, and Prof. T. G. Richardson, who has occupied the Chair of Anatomy in the Pennsylvania Medical College, has been appointed to supply the vacancy. Prof. Richardson is associated with Prof. Gross in the editorial charge of the *North American Medico-Chirurgical Review*, from whose columns we shall be sorry to miss his supervision and imprint, which may be necessitated by this change; but hope for a transfer, not a cessation of his editorial labors.

— In a case of fracture of the neck of the inferior maxillary bone, Dr. Heydock, of Chicago, lately devised a very simple but effective apparatus for its treatment. Next month we expect to give a report of the case, which was perfectly successful, with drawings of the apparatus.

— *Honors from Abroad to Dr. Mott.*—Dr. VALENTINE MOTT, the greatest of living surgeons, received by the last steamer his diploma as Honorable Fellow of the Royal Medico-Chirurgical Society of Edinburgh—an honor which, we believe, has been conferred upon no other of our countrymen. Were the Doctor to practice annexing his honorary titles to his name, on all occasions that his name is borrowed, to add lustre or character to any worthy public enterprise, as the custom of some is, he would have need of a strong corps of amanuenses. Besides his home honors, he is Foreign Associate of the Imperial Academy of Medicine of Paris—no other American is; Honorary Fellow of King's and Queen's College of Physicians of Ireland; Fellow of the Royal Medico-Chirurgical Society of London; of the Royal Medical Society of Brussels and of Athens; of the Chirurgical Society of Paris; Knight of the 4th order of the Mejidid of Constantinople, &c., &c.—*N. Y. Times.*

—The corner-stone of the new Island Hospital, on Blackwell's Island, was laid with appropriate ceremonies on Thursday, July 22nd. From the address of Washington Smith, Esq., President of the Board of Governors, we extract the following description of the building to be erected:

The building is to be three and a half stories high, with a stoop roof, by which means there is a gain at a small expense of a full hospital story, 16 feet high, lighted by windows between the cornice and dormers above the cornice. The basement arrangements appear to be complete. The height of ceilings of first and second stories is 14 feet, third story 16 feet.

On each story of each wing there will be in the centre of the building three wards, each capable of containing twenty patients, and two wards in the wings or transverse ends, each capable of containing 32 or 24 patients, as may be decided upon; each ward to be provided with a single bedroom for particular cases; water-closets to be separated by wells of skylights from the building proper. There will be two principal stairways and two hoistways for patients. Bells and speaking tubes will be carried from each ward to the room of the medical staff in the third story of the centre building, and a speaking tube from the third story of the main building to the office and bedroom of the resident physician. The number of patients that can be accommodated without inconvenience will be as follows:

Four wards in basement, 24 each	96
Six wards in first story, 20 each	120
Four wards in first story, 24 each	96
	— 216
Wards in second and third stories	432
	—
In all	744

The wards are all laid out upon a plan adopted by a commission in France, after an examination of the principal hospitals in Europe. It is proposed to adopt the general principle of ventilation of La Reboissiere Hospital, of Paris, now considered the best in Europe. A general fresh-air conductor, fed by a blower from a raised air chimney outside of the building, is carried underneath the basement floor. From this vertical supply tubes, diminishing in the area as they rise, distribute the fresh air in summer, and the heated fresh air in the winter, to each ward, bathroom, and closet.

The wards are supplied by horizontal tubes with vertical pedestals; in each ward these pedestals are covered by perforated plates of metal. The foul air is conveyed from over every two beds of each ward by pipes of glazed earthenware, to the top of the wall, where they are conducted to the foul-air chimneys by tubes of metal. The circulation is produced by coils of steam pipes or stoves in the foul-air chimneys. The heavier gases are taken through openings made around the base of the rooms. It is proposed to force river and fresh water into tanks under the roof by the same engine which drives the blower, and to have hot and cold water tanks at regular distances over the water closets and baths.

The outside walls to be constructed of rubble-stone masonry with hammer-dressed or pointed corners. The outside walls to have an eight inch air space, and four inch inner or furring wall of brick inside of the interior stone-work.

— We learn from the *Cincinnati Lancet and Observer* that a new medical journal is about to be established in North Carolina, under the patronage of the State Medical Society. Dr. Edward Warren, of Edenton, N. C., was appointed editor. It is to be a bi-monthly of 100 pages, at three dollars a year.

— Dr. J. H. B. McClellan, of Philadelphia, has been elected to fill the vacancy in the Pennsylvania Medical College occasioned by the removal of Dr. Richardson to New Orleans.

— Dr. R. K. Smith has been re-elected Chief Resident Physician to Blockley Hospital, Philadelphia, which place has lately been occupied by Dr. McClintock, much to the annoyance of many of the profession in that city.

— Dr. S. G. Armor has resigned the Chair of Pathology and Clinical Medicine in the Missouri Medical College, and Dr. McMartin, of St. Louis, has been appointed to fill the vacancy.

— Correspondents will notice the change in the business office of the MONTHLY, and please direct their favors accordingly.